

حمل الآن

مجانا وحصريا

المراجعة رقم (1)

الترم الثاني





Second Term Questions Bank



Question 01

Choose the correct answers



- 1 In..... regions the rate of evaporation would be the highest
 (a) moderate (b) Hottest (c) coolest (d) polar
- 2 energy is the energy that drives the water cycle.
 (a) Potential (b) Solar (c) Sound (d) Electrical
- 3 Clouds are formed due to process.
 (a) melting (b) Condensation (c) collection (d) freezing
- 4 The flamingo feed on.....
 (a) algae (b) mouse (c) eagle (d) hawk
- 5 The water changes from liquid to gas by process.
 (a) melting (b) Condensation (c) Evaporation (d) freezing
- 6 Evaporation refers to the transformation from.....state tostate.
 (a) liquid- solid (b) solid - liquid (c) liquid- gas (d) Solid - gas
- 7 Leakage of water into ground water reservoirs is due to the action of.....
 (a) condensation (b) Gravity (c) evaporation (d) condensation
- 8 The evaporation of water from leaves of plants is called.....
 (a) transpiration (b) Collection (c) melting (d) evaporation
- 9 About 10% of water vapor in the air comes from transpiration of.....
 (a) humans (b) Rocks (c) animals (d) plants
- 10 Water vapor that is present in air changes into.....when it hits a cold-water bottle
 (a) gas state (b) liquid water (c) steam (d) Juice
- 11 Causes falling of ice in glaciers from a higher altitude to a lower altitude.
 (a) Convection (b) Sunlight (c) Gravity (d) Wind



- 12 All the following are water reservoirs, except
 (a) Seas (b) Glaciers (c) Moon (d) Living organisms
- The.....forms when many tiny water droplets together.
 13 (a) rain (b) Cloud (c) water vapor (d) fog
- Due to convection,air moves upward above..... air.
 14 (a) cold-hot (b) hot-cold (c) cold-warm (d) warm-hot
- Fresh water is stored underground in the form of groundwater by the effect of.....
 15 (a) condensation (b) Electricity (c) gravity (d) evaporation
- When a liquid is heated, it will.....and become less dense and.....
 16 (a) expand-heavier (b) contract-lighter (c) expand-lighter (d) contract-heavier
- When air is heated it's changes.
 17 (a) mass (b) Smell (c) color (d) density
- Heat transfers by convection in and
 18 (a) Liquids-gases (b) Gases - solids (c) Solids -Liquids (d) Liquids - space
- In convection currents, cold air is so it
 19 (a) less dense-sinks (b) more dense-rises (c) less dense-rises (d) more dense-sinks
- When air is heated it's changes
 20 (a) mass (b) smell (c) color (d) density

Question 02

put (true) or (false)

- 1 In the water cycle, the step that follows condensation process is runoff. ()
- 2 Falling of hail in coolest regions is an example of evaporation process. ()
- 3 The weather of the area near the equator is very cold. ()
- 4 In hottest regions, the rate of evaporation process is the greatest. ()
- 5 Temperature increases when slanted sun rays are distributed over a large area. ()



- 6 Oceans are the main source of evaporation in the water cycle. ()
- 7 Flamingos immigrates to a salt lake in Turkey, but its suddenly dried. ()
- 8 The flamingos feed on algae in the fresh water. ()
- 9 Condensation process is turning hot water into water vapor. ()
- 10 Dropping water level in lakes as a result evaporation. ()
- 11 The volume of water in a puddle increases by increasing the runoff. ()
- 12 You can see transpiration process, when you set a plant its leaves covered with plastic bag in the sunlight. ()
- 13 The force of gravity affects the movement of water in the water cycle. ()
- 14 Water cycle is the movement of water between different reservoirs. ()
- 15 Small lakes dry as a result of the run off. ()
- 16 Condensation occurs when a gas is heated and turning to a liquid. ()
- 17 When the sun rays fall semi-inclined on Earth's surface, they will distribute on a large area giving low effect of heat. ()
- 18 Hot air has higher density than that of cold air , so it rises up to the atmosphere. ()
- 19 The density of air decreases by increasing temperature. ()
- 20 From the factors that determine the wind direction is the amount of solar radiation that reaches the Earth ()

Question 03

complete the following sentences using words between brackets

- 1 Formation of fog is due to the of water vapor in a field early in the morning.
- 2 The three main processes which are responsible for movement of water through the water bodies on Earth are evaporation, condensation and
- 3 When water changes from solid state to liquid it energy.
- 4 The change of water from the liquid state to the gaseous state is called
- 5 The water level of a lake decreases as a result of
- 6 The most important source of energy in water cycle is
- 7 From the environmental challenge that faces flamingos is



- 8 The weather of the region near the equator is more.....
- 9 The amount of energy that reaches the Earth affects in rate evaporation in water cycle.
- 10 When in air hits a cold glass of juice it will condense.
- 11 is a force that affects the movement of water in the water cycle.
- 12 When the water droplets in clouds become too heavy, it causes
- 13 Transpiration is a type of in plants.
- 14 Water can be pulled downward by Force.
- 15 The movement of water through different water reservoirs on Earth is called
- 16 The processes that need gaining energy of water in water reservoirs are and
- 17 When a gas or a liquid is heated, its density will
- 18 The air rises up.
- 19 The two basic factors for water cycle are and
- 20 Water state changes in water cycle by or energy.

Question 04

write the scientific term for each of the following

- 1 The main source of energy that affects the water cycle ()
It is the process in which water falls on Earth in the form of ()
rain, sleet, snow or hail.
- 2 It is the process in which water changes from gas state to liquid state. ()
- 3 The process in which matter changes from liquid state to gas state. ()
- 4 It is the step in which water flows along Earth's surface into the river and then into the ocean or sea ()
- 5 It is the continuous movement of water between the Earth's surface and the atmosphere. ()
- 6 It is the process which helps in the formation of clouds in the sky. ()
- 7 The process that causes entering water to the atmosphere in a form of water vapor. ()
- 8 They are places for storing water on Earth. ()



- 10 The force which causes moving down of water from higher places to lower places on Earth. ()
- 11 Is a form of evaporation that takes place through the stomata which are found in plant leaves. ()
- 12 Large area of land which are formed due to the effect of dry air. ()
- 13 It is formed from millions of tiny water droplets which are condensed from water vapor in the sky. ()
- 14 A process that plants get rid of exceeds water in water vapor form through spores. ()
- 15 A liquid turns into a gas by gaining energy. ()
- 16 It is the method by which heat of the sun transfers from space to Earth. ()
- 17 The process that occurs when the water droplets which forming clouds become heavier and fall down by gravity. ()

Question 05

Give reason for each of the following

- 1 Drying up of the large Salt Lake in Turkey in summer season.
.....
- 2 Formation of fog in the early morning.
.....
- 3 Drying up of a shallow lake in summer season.
.....
- 4 Formation of clouds in the sky.
.....
- 5 About 10% of water vapor in air comes from plants.
.....
- 6 Ice crystals and water droplets in clouds fall back again earth.
.....
- 7 Water percolates down into the ground.
.....
- 8 Living organisms are considered a part of water cycle on Earth surface.
.....



9 Ice crystals and water droplets in clouds fall back again to earth.

.....

10 The occurrence of evaporation process.

.....

11 Transpiration in plant is a special type of evaporation.

.....

12 The effect of heat is low in the area at the north and south of the equator.

.....

13 Hot air moves upward above cold air.

.....

14 The area near the equator is very hot.

.....

15 Deserts formation.

.....

16 Dry air forms deserts.

.....

17 The region near the two poles are very cold.

.....

18 Deserts get very little rain.

.....

19 The temperature differs around the world.

.....

20 Feeling very hot at the equator.

.....



Question 06

What happens if ?

1 The level of water in a lake when the rate of evaporation increases.

.....

2 The snow when sunlight falls on it.

.....

3 The weather if the sun rays fall very inclined on an area.

.....

4 A lake is subjected to very hot temperature.

.....

5 Water vapor in air condenses in the sky.

.....

6 Water gains high heat energy.

.....

7 Evaporation of water in lake increases.

.....

8 Water runs off the land.

.....

Put green plant inside plastic bag and expose it to the sun.

9

.....

10 Air cools in upper atmospheric layers .

.....

11 Air near Earth's surface is warmed.

.....

12 To the density of air if the cold air is warmed by the effect of solar energy.

.....



Place a blue jar with hot water on the top of a red jar with cold water
(relative to mixing colors)

13

The difference of air particles temperature (relative to convection currents).

14

Very dry wind blows over an area of the land.

15

The surface water exposes to high temperature from the sun.

16

Question 07

Answer the following questions

1

Mention the main factors in the water cycle

2

Explain the role of gravity in water cycle in the nature.

3

Explain the role of the sun in water cycle in nature .

4

Explain the importance of ocean currents?

5

Explain The role of the gravity in water cycle in nature.

6

How does the amount of solar energy effects the transpiration rate of plants?

7

What are the main stages of water cycle in nature?



Question 01

Choose the correct answers

CONCEPT
3.2

- 1 The density of cold air is.....that of hot humid air.
☐ a more than ☐ b equal to ☐ c less than ☐ d similar to
- 2 The side of coastal mountain ranges in which humid air moves up when hitting a mountain is the side, while the other side is the side.
☐ a wet-dry ☐ b dry-wet ☐ c dry-dry ☐ d wet-wet
- 3 A rain shadow is an area that is formed behind.....
☐ a Trees ☐ b building ☐ c mountain ☐ d bridges
- 4 The density of hot humid air is.....that of cold dry air.
☐ a more than ☐ b less than ☐ c equal to ☐ d similar to
- 5 Coastal mountains range often have two sides which are..... side and.....
☐ a Narrow-wide ☐ b wet- dry ☐ c high-low ☐ d dark-dry
- 6 The amount of water vapor in the air is known as
☐ a humidity ☐ b evaporation ☐ c condensation ☐ d a cloud
- 7 The density of hot humid air is that of cold dry air.
☐ a more than ☐ b less than ☐ c equal to ☐ d similar to
- 8 The air particles density increases at the..... of the mountain.
☐ a top ☐ b bottom ☐ c middle ☐ d higher
- 9 Theeffects on climate and weather.
☐ a mountains ☐ b kind of soil ☐ c reservoirs ☐ d all the previous
- 10 We can describe thethat is very fast
☐ a air density ☐ b wind ☐ c humidity ☐ d temperature
- 11 The weather condition in a short period of time is the
☐ a Humidity ☐ b Climate ☐ c Weather ☐ d Clouds
- 12 Thecan give a report about air condition
☐ a Fireman ☐ b Meteorologist ☐ c Astronaut ☐ d Pilot



- 13 Land heats up.....and cools of compared to that of water.
 (a) quickly-quickly (b) slowly-slowly (c) quickly-slowly (d) slowly-quickly
- 14 If the temperature of the sand in a desert is 50 °C at noon, its temperature may reach.....°C at night.
 (a) 20 (b) 60 (c) 70 (d) 80
- 15 The amount of water vapor in the air is known as.....
 (a) Humidity (b) evaporation (c) condensation (d) the clouds
- 16 is used to measure the current atmospheric pressure.
 (a) Anemometer (b) Barometer (c) Thermometer (d) Rain gauge
- 17 Theis the amount of water vapor present in the air.
 (a) air density (b) atmospheric pressure (c) humidity (d) temperature
- 18 Theis one of the tools that designed to carry measuring tools.
 (a) weather balloons (b) barometer (c) rain gauge (d) thermometer
- 19 The first step in weather forecast and understand the climate changes is..... process.
 (a) data analyze (b) data collecting (c) connecting things (d) using maps
- 20 Theis used in determining temperature
 (a) barometer (b) thermometer (c) anemometer (d) weather radar
- 21 When a liquid is heated, it will.....and become less dense and.....
 (a) expand-heavier (b) contract-lighter (c) expand-lighter (d) contract-heavier
- 22 When air is heated it's changes.
 (a) mass (b) smell (c) color (d) density
- 23 All the following instruments are used to measure weather states except
 (a) anemometer (b) weather balloon (c) weather radar (d) barometer
- 24 The anemometer is used to measure
 (a) adaptation (b) rainfall (c) evaporation (d) wind speed



To know whether it rained more this summer or last summer, the meteorologist should use

- 25 ☐ a barometer ☐ b rain gauge ☐ c weather radar ☐ d anemometer

The..... is used in determining wind speed.

- 26 ☐ a anemometer ☐ b barometer ☐ c radar ☐ d thermometer

The increase in the amount of rain for a long period of time may cause.....

- 27 ☐ a flooding ☐ b snowfall ☐ c drought ☐ d sandstorms

The increase in the amount of rain may cause

- 28 ☐ a Drought ☐ b sandstorms ☐ c dust storm ☐ d flooding

A occurs when strong winds blow up sand from a dry area as deserts .

- 29 ☐ a drought ☐ b desertification ☐ c flood ☐ d sandstorm

Sandstorm occur in regions.

- 30 ☐ a polar ☐ b coastal ☐ c desert ☐ d ice

Question 02

put (true) or (false)

- 1 A rain shadow is an area that is formed behind trees ()
- 2 There is a very large amount of rain in the desert. ()
- 3 The air density at the top of a mountain is more than that at the bottom of a mountain. ()
- 4 Using solar panels is a way of developing farming methods. ()
- 5 A rain shadow occurs in the windward side ()
- 6 Weather is an atmosphere condition during long period of time. ()
- 7 All places on Earth receive the same amount of solar energy. ()
- 8 From weather elements humidity percentage and wind speed ()
- 9 The sand is cooled off in a shorter time than sea water during nighttime. ()
- 10 The weight of air above a certain area is known as temperature ()
- 11 The spinning of the paper spirals over a turned on lamp indicates the occurrence of convection currents. ()



- 12 The anemometer is used in determining air pressure ()
- 13 Water reservoirs lose heat slowly ()
- 14 The barometer is used to determine air pressure. ()
- 15 The weather radar is used to measure the wind speed ()
- 16 The density of air decreases by increasing temperature ()
- 17 Sandstorms blow up from a dry area such desert ()
- 18 Although flooding is harmful, it also has some benefits ()
- 19 One of the negative effect of sandstorm is the dust fills the irrigation canals, affecting the water quality ()

Question 03

complete the following sentences using words between brackets

- 1 One of the characteristics of desert soil it is a fertility soil.
- 2 Air pressure at the top of the mountain is than air pressure at the bottom of the mountain.
- 3 One of the difficulties that farmers face while farming in the desert is
- 4 The very tall mountains often have two sides; one is wind and the other is wind
- 5 Warm wet air molecules rise up while cold air molecules fall down as a result of process.
- 6 Sea water absorbs slowly
- 7 is the amount of water vapor in air.
- 8 The scientist who studies the earth's atmosphere is called
- 9 can build up on solar panels as a result of storms, cause disrupting power.
- 10 Devices that carry the measurement tools are _
- 11 Using is the most effective way in analyzing the collected data.
- 12 The difference in air temperature of areas that are close to each other affects the speed of and air currents.
- 13 Anemometer is used to measure the speed.
- 14 When air is heated, it_.....
- 15 Meterologists use to track thunderstorms and hurricanes



- 16 At noon, sand get hot in a time than water
- 17 is used to predict precipitation, thunderstorms, and hurricanes
- 18 Heavy rain for a long period of time, may cause

Question 04

write the scientific term for each of the following

- 1 A phenomenon that occurs as a result of descending warm and dry air at the dry side of a coastal mountain range. ()
- 2 A side of mountain ranges at coastal regions that face the coast. ()
- 3 It is the science of studying and predicting the weather ()
- 4 It is the weight of the air above an area ()
- 5 A scientist who uses a variety of tools to study and predict the weather ()
- 6 The weather condition in a long period of time ()
- 7 A phenomenon occurs when wind blows over mountain's chains ()
- 8 The water vapor existing amount in air ()
- 9 The science that studies the weather conditions ()
- 10 The scientist who used a variety of tools and instruments to study and forecast weather. ()
- 11 It is the weight of the air above an area ()
- 12 A device used to measure atmospheric pressure ()
- 13 A device that is used in measuring the volume and speed of rain fall ()
- 14 The amount of force that air affects on the surrounding environment ()
- 15 The amount of water vapor that present in air. ()
- 16 A device is used in tracking hurricanes and storms. ()
- 17 A device is used in determine air pressure ()
- 18 It's a natural phenomenon that occurs when the level of water in a river increases until it overflows its banks ()
- 19 Several shortage of water available in an area. ()



- 20 Strong winds carry sand and dust blow up from an extremely dry area ()
- 21 Water flows over the edge of the riverbank and onto the land ()
- 22 The land suddenly floods with water ()

Question 05

Give reason for each of the following

- 1 Snow forms on the top of the mountain, while the water remains liquid at the bottom.
.....
- 2 Air movement (in the term of temperature)
.....
- 3 Plants grow slowly in the windless area of the mountain.
.....
- 4 It is suitable to cultivate in the mountain on the side that facing wet air.
.....
- 5 Meteorologists represent weather forecasts as probability ratio.
.....
- 6 When hot air loses its heat, it descends.
.....
- 7 Snow fall in some places.
.....
- 8 The spinning of the paper spirals over a turned-on-lamp.
.....
- 9 Weather forecasting is difficult and meteorologists may not be able to make accurate predictions.
.....
- 10 Sandstorms have harmful effects on human health
.....



- 11 The dangerous of flooding increases if the land is frozen
-

Question 06

What happens if ?

- 1 The atmospheric pressure, as we move up toward the top of a mountain
-
- 2 The air density, as we move down toward the bottom of the mountain.
-
- 3 The air cools and water vapor condense at the sky.
-
- 4 The amount of water vapor in the air increases.
-
- 8 Sand and water at night after they exposed to sunlight at the day.
-
- 9 Putting a lit lamp is placed 5cm away from a beaker contains sand and another beaker contains the same amount of water.
-
- 10 The sever decreasing in temperature in some places.
-
- 11 Dust can build up on solar panels surfaces.
-
- 12 Putting a lit lamp is placed 5cm away from a beaker contains sand and another beaker contains the same amount of water.
-
- 13 The water movement when boiling it in a pot.
-
- 14 Air near Earth's surface is warmed.
-



15 To the density of air if the cold air is warmed by the effect of solar energy.

16 Rising higher in relation to atmospheric pressure and temperature.

17 Placing a paper spiral over a turned-off-lamp.

18 If the dust accumulates on solar panels.

19 The ice melts suddenly.

20 The weather is dry for a long time.

Question 07

Answer the following questions

1 Mention the effects of drought

2 Mention the effects of Sandstorm:

3 Mention the effects of Flooding

4 Mention the importance of Barometer

5 Mention the importance of Weather Radar

6 Mention the importance of Weather balloons

7 Explain methods that farmers created to overcome desert soil.



- 8 What is the reason the occurrence of sandstorms
.....
- 9 A farmer noticed a heavy rainfall on his farm and he wanted to determine the amount of rain in this area. What device is used for that?
.....
- 10 Mention the main stages of the weather forecasting process.
.....

Question 01

Choose the correct answers

CONCEPT
4.1

- 1 Dorcas gazelle lives in.....
 (a) tropical area (b) desert area (c) north pole (d) south pole
- 2 The Red Sea in Egypt includes all of the following environments, except.....environment.
 (a) marine (b) mountain (c) rainforest (d) Coastal
- 3 All the following are biotic factors except.....
 (a) animals (b) insects (c) precipitation (d) grass
- 4 Poison dart frog lives in.....environment.
 (a) Arctic (b) tropical rain forest (c) desert (d) Antarctic
- 5 All the following are from abiotic factors in an ecosystem except.....
 (a) air (b) sun light (c) water (d) plants
- 6 Water, sunlight, and air are examples of factors in the ecosystem.
 (a) biotic (b) living (c) non-essential (d) abiotic
- 7 Abiotic factors in an ecosystem include
 (a) animals and air (b) grasses and soil (c) Non-living things (d) living organisms
- 8 All the following are from biotic factors in an ecosystem except
 (a) human (b) plants (c) animals (d) soil
- 9 Which of the following is not considered from the abiotic factors
 (a) Light (b) Water (c) Temperature (d) Plant



- 10 From the behavioral adaptations is
- a Thick skin b Fur c Long ears d Bird migration
- 11 All the following are inherited traits in humans except,
- a eye color b nose shape c fur color d ear shape
- 12 Genes are tiny structures that found in.....
- a cell nucleus b cell membrane c cell wall d mitochondria

Question 02

put (true) or (false)

- 1 Thorns on a plant stem, is an example of structural adaptation. ()
- 2 Birds migrate to areas that have no water or food. ()
- 3 Offspring receive their environmental factors from their parents. ()
- 4 Genes carry inherited traits from parents to their offspring ()
- 5 The structural adaptations of an organism are related to the structure of its body. ()
- 6 Around each eye of Emperor penguin, there is a circle of skin that does not have any feathers. ()
- 7 Ecosystems contain biotic factors and abiotic factors. ()
- 8 Biotic factors of an ecosystem include sunlight, air and water ()
- 9 The amount of light affects the growth of plants. ()
- 10 Chrysanthemum plant can produce flowers when the nights are longer than days. ()
- 11 African penguin has thick blubber and dense feathers to keep its body warm ()
- 12 Abiotic factors affect the growth and the adaptation of biotic factors. ()
- 13 Deserts may be hot or cold areas. ()
- 14 The size of the organism's natural habitat does not affect its growth ()
- 15 The size of a living organism is one of the traits that is not affected by genetic factors. ()
- 16 The body of the emperor penguin is covered with a thin layer of skin to overcome the low temperature ()



- 17 All living organisms inherited traits from their parents ()
- 18 Sphinx cat doesn't have the genetic factor for long silky hair ()
- 19 There is no sphinx cat has long hair like Birman cat ()

Question 03

complete the following sentences using words between brackets

- 1 The carry inherited traits from parents to their offspring.
- 2 The adaptation that is related to the body structure of living organism is known as
- 3 Food, water and the basic needs for living organisms to live and survive
- 4 Some desert plants have thick leaves to store
- 5 Thick fur is an example of adaptation for animals that live in polar climate.
- 6 Photosynthesis process is affected by some environmental factors such as
- 7 The process by which an organism becomes more able to survive in its environment is called
- 8 The sunlight, soil, temperature and precipitations are examples for factors
- 9 The palm tree adapts with of water in the desert.
- 10 Fish migration is considered one of the adaptations.
- 11 From the environmental factors affecting living organisms are and
- 12 The leaves of plants in the Western Desert are
- 13 All living organisms inherited factors which transferred from parents to their offspring.
- 14 The way of your earlobes hang and the length of your fingers are two inherited traits controlled by that are found in the cell nucleus.
- 15 It is considered one of the reasons for birds returning to their habitat.

Question 04

write the scientific term for each of the following

- 1 A process through which the living organisms be able to live and survive in its environment. ()
- 2 The change in the act of living organism to help it survive. ()



- 3 The seasonal migration of animals from one place to another and considered a behavioral adaptation. ()
- 4 The process by which a living organism becomes capable of living in an environment in a way that enables its survival. ()
- 5 It contains biotic factors and abiotic factors that interact with each other. ()
- 6 The factors that include living organisms in an ecosystem ()
- 7 A desert biome that has a cold temperature all the year ()
- 8 They are responsible for determining the body feature, and present in the cell nucleus ()
- 9 It is the factor that controls which trait get inherited from parents to their offspring ()
- 10 Factors that determine the structure and characteristics of a living organism and are passed from parents to offspring ()
- 11 They are the living organisms in the ecosystem, such as plants and animals. ()
- 12 A behavior or any way acts by a living organism to survive. ()

Question 05

Give reason for each of the following

- 1 Falcons and eagles migrate to Egypt in winter.
.....
- 2 Birds migrate from one place to another place.
.....
- 3 Plants in desert are adapted to survive in extreme conditions.
.....
- 4 How can the Dorcas gazelle camouflage in the desert?
.....
- 5 Some plants that live in a desert ecosystem have long roots.
.....
- 6 Poison dart frog has colorful poisonous skin.
.....
- 7 Desert plants have thick stems or leaves.
.....



- 8 How do the environmental factors affect the growth of living organisms?
.....
- 9 Plants manage to adapt to warm and dry climates?
.....
- 10 Sphynx cat doesn't have long hair.
.....

Question 06

What happens if ?

- 1 Water and light are not available.
.....
- 2 The plants in an ecosystem, if they receive too intense light.
.....
- 3 If water and light are not available.
.....
- 4 Rain falls on desert in suitable quantities.
.....
- 8 If the poison dart frog doesn't have big eyes.
.....
- 9 If the Arctic fox does not have a thick fur.
.....
- 10 Lack of light for plant growth
.....



Question 07

Answer the following questions

- 1 Explain the reasons for bird migration?
.....
- 2 How do genetic factors affect the growth of living organisms?
.....
- 3 Identify some traits of a living organism that are determined by genetic factors?
.....
- 4 Mention the different environmental factors that help living organisms to grow?
.....

Question 01

Choose the correct answers



- 1is the loose layer that covers Earth's crust.
 (a) Humus (b) Water (c) Soil (d) Air
- 2 All the following are from organic ingredients of soil, except.....
 (a) fungi (b) dead plants (c) water (d) rocks
- 3 The soil provides the plant with all the following, except.....
 (a) water (b) nutrients (c) air (d) sunlight
- 4 The material rich-in nutrients and produced from the decomposition of dead organisms is
 (a) decomposer (b) humus (c) water (d) sand
- 5 From organic materials which is found in the soil.....
 (a) Air (b) water (c) rocks (d) humus
- 6 Form the components that are not found in the soil
 (a) living organisms (b) minerals (c) water and air (d) sunlight



- 7 The arrangement of soil types according to the size of soil particles from largest to smallest is
- a sand, silt, clay b silt, sand, clay c clay, sand, silt d sand, clay, silt
- 8 From organic materials which is found in the soil
- a Air b Water c Rocks d humus
- 9 The color of sand soil is.....
- a yellow b black c grey d red.
- 10 soil holds water well so, it becomes.....most of the time.
- a Sand-wet b Clay-wet c Clay-dry d Silt -dry
- 11 Bogs contain..... soil that retains amount of water.
- a silt-medium b sand-large c clay-large d clay-medium
- 12 Savannas are..... ecosystem.
- a wet polar b wet grassland c dry polar d dry grassland
- 13 The color of sand soil is.....
- a yellow b green c white d black
- 14 The Bog ecosystem has soil.
- a Sand b gravel c clay d silt
- 15 Soil with large spaces between its particle is characterized by the ability to allow water to flow through it and retain it
- a slowly-well b quickly- well c quickly-poorly d slowly – poorly
- 16 Silt soil contains particles and its color is
- a Large- yellow b Large-dark c medium-dark d Medium-gray
- 17is the form of invasive species that are found in the red sea.
- a Emperor penguin b Poison dart frog c Lion fish d Lizard
- 18 The change in climate leads to the of some living organisms
- a increase b extinction c reproduction d pollution
- 19 Traditional bricks and concrete must be burned at temperature and produce amount of pollution.
- a high-small b high-large c low-large d low-small



Question 02

put (true) or (false)

- 1 All types of soil are similar in color and structure ()
- 2 The size of sand particles is smaller than silt and clay particles ()
- 3 Sandy soil has small-sized particles ()
- 4 Soil is important for animal only ()
- 5 Soil is the home of some living organisms ()
- 6 If you examine a sample of soil, you will see only one type of ingredients in it ()
- 7 Inorganic ingredients make up more than half of all soil types ()
- 8 The size of sand particles is smaller than that of silt particles ()
- 9 Water flows through sand soil faster than in clay soil ()
- 10 The glue-like substance which is used in binding materials together is formed from the chemical change of the topsoil ()
- 11 The difference sand soil and clay soil in the color only. ()
- 12 Clay soil retains more amount of water than the sand soil ()
- 13 Soil differs in their color and their ability to hold water ()
- 14 All types of soil are similar in color and the texture ()
- 15 Algae is a type of plant that likely grows in dry, porous soil ()
- 16 Natural changes can benefit the soil ()
- 17 Converting fertile agricultural lands into cities leads to increase the deforestation of the land. ()
- 18 Desertification is a process by which land becomes more fertile ()
- 19 Lionfish is from the native species in the Red Sea areas ()
- 20 Desertification process is due to drought or overgrazing ()
- 21 To prevent water pollution, laws must be applied ()

Question 03

complete the following sentences using words between brackets

- 1 The two processes related to the disintegration of rocks and minerals that make up soil are and



- 2 Over uses of cause depletion of the soil.
- 3 The building units of rocks are called
- 4 The processes that play an important role in the soil formation are erosion, and
- 5 According to the size of particles in the soil, are the biggest particles, while are the smallest particles
- 6 The thin layer which covers the earth's crust is called
- 7 The building unit of rocks is
- 8 From the components that are not found in the soil,
- 9 is formed from the decomposition of dead organisms' remains
- 10 The two processes related to the disintegration of rocks and minerals that make up soil are and erosion
- 11 During rainfall, the soil of humid areas retains amount of water
- 12 Clay soil can retain more amount of water while can retain small amount of water
- 13 Sandy soil allows water to flow fast while soil allows water to flow slowly
- 14 Sandy soil is and loose soil, so large trees can't grow in it
- 15 Increasing the inclination of the land leads to the increase of process of the soil.
- 16 In the Red Sea, lion fish is considered as species that harm the native species
- 17 Human activities cause the increase in gas percentage and lead to the increase in Earth's
- 18 Food, water and the basic needs for living organisms to live and survive

Question 04

write the scientific term for each of the following

- 1 The loose layer that covers Earth's surface ()
- 2 The building blocks of rocks ()
- 3 The process that breaks down rock into small particles ()
- 4 The spaces between soil particles. ()
- 5 The distance between the particles of the soil ()



- 6 Living organisms help in recycling nutrients from dead plants and animals back to the soil ()
- 7 The dark(black) soil that can retain large amount of water ()
- 8 A type of soil retains medium amount of water and has medium pore spaces between its particles ()
- 9 Grassland ecosystem that contains dry sand soil and are common in central Africa ()

Question 05

Give reason for each of the following

- 1 Decomposers have an important role in the formation of soil.
.....
- 2 Water can flow very fast through sand soil.
.....
- 3 Clay soil can retain more amount of water.
.....
- 4 Desertification process increases recently.
.....
- 5 Volcanic eruptions have a beneficial role in a habitat.
.....
- 6 We should keep green areas and reduce the amount of fertilizers.
.....
- 7 Lack of light for plant growth.
.....

انتهت الأسئلة مع أطيب الامنيات بالنجاح





Second Term Questions Bank



Question 01

Choose the correct answers



- 1 In..... regions the rate of evaporation would be the highest
 (a) moderate (b) Hottest (c) coolest (d) polar
- 2 energy is the energy that drives the water cycle.
 (a) Potential (b) Solar (c) Sound (d) Electrical
- 3 Clouds are formed due to process.
 (a) melting (b) Condensation (c) collection (d) freezing
- 4 The flamingo feed on.....
 (a) algae (b) mouse (c) eagle (d) hawk
- 5 The water changes from liquid to gas by process.
 (a) melting (b) Condensation (c) Evaporation (d) freezing
- 6 Evaporation refers to the transformation from.....state tostate.
 (a) liquid- solid (b) solid - liquid (c) liquid- gas (d) Solid - gas
- 7 Leakage of water into ground water reservoirs is due to the action of.....
 (a) condensation (b) Gravity (c) evaporation (d) condensation
- 8 The evaporation of water from leaves of plants is called.....
 (a) transpiration (b) Collection (c) melting (d) evaporation
- 9 About 10% of water vapor in the air comes from transpiration of.....
 (a) humans (b) Rocks (c) animals (d) plants
- 10 Water vapor that is present in air changes into.....when it hits a cold-water bottle
 (a) gas state (b) liquid water (c) steam (d) Juice
- 11 Causes falling of ice in glaciers from a higher altitude to a lower altitude.
 (a) Convection (b) Sunlight (c) Gravity (d) Wind



- 12 All the following are water reservoirs, except
 (a) Seas (b) Glaciers (c) Moon (d) Living organisms
- The.....forms when many tiny water droplets together.
 (a) rain (b) Cloud (c) water vapor (d) fog
- 14 Due to convection,air moves upward above..... air.
 (a) cold-hot (b) hot-cold (c) cold-warm (d) warm-hot
- 15 Fresh water is stored underground in the form of groundwater by the effect of.....
 (a) condensation (b) Electricity (c) gravity (d) evaporation
- 16 When a liquid is heated, it will.....and become less dense and.....
 (a) expand-heavier (b) contract-lighter (c) expand-lighter (d) contract-heavier
- 17 When air is heated it's changes.
 (a) mass (b) Smell (c) color (d) density
- 18 Heat transfers by convection in and
 (a) Liquids-gases (b) Gases - solids (c) Solids -Liquids (d) Liquids - space
- 19 In convection currents, cold air is so it
 (a) less dense-sinks (b) more dense-rises (c) less dense-rises (d) more dense-sinks
- 20 When air is heated it's changes
 (a) mass (b) smell (c) color (d) density

Question 02

put (true) or (false)

- 1 In the water cycle, the step that follows condensation process is runoff. ☐
- 2 Falling of hail in coolest regions is an example of evaporation process. ☐
- 3 The weather of the area near the equator is very cold. ☐
- 4 In hottest regions, the rate of evaporation process is the greatest. ☒
- 5 Temperature increases when slanted sun rays are distributed over a large area. ☐



- 6 Oceans are the main source of evaporation in the water cycle. ☐
- 7 Flamingos immigrates to a salt lake in Turkey, but its suddenly dried. ☒
- 8 The flamingos feed on algae in the fresh water. ☐
- 9 Condensation process is turning hot water into water vapor. ☐
- 10 Dropping water level in lakes as a result evaporation. ☒
- 11 The volume of water in a puddle increases by increasing the runoff. ☒
- 12 You can see transpiration process, when you set a plant its leaves covered with plastic bag in the sunlight. ☒
- 13 The force of gravity affects the movement of water in the water cycle. ☒
- 14 Water cycle is the movement of water between different reservoirs. ☒
- 15 Small lakes dry as a result of the run off. ☐
- 16 Condensation occurs when a gas is heated and turning to a liquid. ☐
- 17 When the sun rays fall semi-inclined on Earth's surface, they will distribute on a large area giving low effect of heat. ☒
- 18 Hot air has higher density than that of cold air , so it rises up to the atmosphere. ☐
- 19 The density of air decreases by increasing temperature. ☒
- 20 From the factors that determine the wind direction is the amount of solar radiation that reaches the Earth ☒

Question 03

complete the following sentences using words between brackets

- 1 Formation of fog is due to the condensation of water vapor in a field early in the morning.
- 2 The three main processes which are responsible for movement of water through the water bodies on Earth are evaporation, condensation and precipitation.
- 3 When water changes from solid state to liquid it gains energy.
- 4 The change of water from the liquid state to the gaseous state is called evaporation
- 5 The water level of a lake decreases as a result of evaporation.
- 6 The most important source of energy in water cycle is the sun.
- 7 From the environmental challenge that faces flamingos is climate changes (Drought).



- 8 The weather of the region near the equator is more **hot**.
- 9 The amount of **solar** energy that reaches the Earth affects in rate evaporation in water cycle.
- 10 When **water vapor** in air hits a cold glass of juice it will condense.
- 11 **Gravity** is a force that affects the movement of water in the water cycle.
- 12 When the water droplets in clouds become too heavy, it causes **precipitation**.
- 13 Transpiration is a type of **evaporation** in plants.
- 14 Water can be pulled downward by **Gravity** Force.
- 15 The movement of water through different water reservoirs on Earth is called **water cycle**.
- 16 The processes that need gaining energy of water in water reservoirs are **evaporation** and **melting**
- 17 When a gas or a liquid is heated, its density will **decrease**.
- 18 The **warm** air rises up.
- 19 The two basic factors for water cycle are **gravity** and **thermal energy**.
- 20 Water state changes in water cycle by **gaining** or **losing** energy.

Question 04

write the scientific term for each of the following

- | | |
|---|-----------------------|
| 1 The main source of energy that affects the water cycle | The sun |
| 2 It is the process in which water falls on Earth in the form of rain, sleet, snow or hail. | Precipitation process |
| 3 It is the process in which water changes from gas state to liquid state. | Condensation process |
| 4 The process in which matter changes from liquid state to gas state. | Evaporation process |
| 5 It is the step in which water flows along Earth's surface into the river and then into the ocean or sea | Runoff |
| 6 It is the continuous movement of water between the Earth's surface and the atmosphere. | Water cycle |
| 7 It is the process which helps in the formation of clouds in the sky. | Condensation |
| 8 The process that causes entering water to the atmosphere in a form of water vapor. | Evaporation process |
| 9 They are places for storing water on Earth. | Water reservoirs |



- | | | |
|----|---|-----------------------|
| 10 | The force which causes moving down of water from higher places to lower places on Earth. | Gravity force |
| 11 | Is a form of evaporation that takes place through the stomata which are found in plant leaves. | Transpiration |
| 12 | Large area of land which are formed due to the effect of dry air | Desert |
| 13 | It is formed from millions of tiny water droplets which are condensed from water vapor in the sky. | Cloud |
| 14 | A process that plants get rid of exceeds water in water vapor form through spores. | Transpiration process |
| 15 | A liquid turns into a gas by gaining energy. | Evaporation process |
| 16 | It is the method by which heat of the sun transfers from space to Earth. | Radiation |
| 17 | The process that occurs when the water droplets which forming clouds become heavier and fall down by gravity. | Precipitation process |

Question 05

Give reason for each of the following

- 1 Drying up of the large Salt Lake in Turkey in summer season.
Due to the increase in the evaporation of the lake water.
- 2 Formation of fog in the early morning.
Due to the condensation of water vapor that is found in the air.
- 3 Drying up of a shallow lake in summer season.
Because of the increase in the evaporation level during summer season.
- 4 Formation of clouds in the sky.
Due to the condensation of water vapor into water droplets that accumulate to form clouds.
- 5 About 10% of water vapor in air comes from plants.
Due to transpiration process that happens by plants.
- 6 Ice crystals and water droplets in clouds fall back again earth.
Because the gravity force pull water and ice crystals downward.



- 7 Water percolates down into the ground.
Due to the effect of gravity force on water.
- 8 Living organisms are considered a part of water cycle on Earth surface.
Because they are an example of water reservoirs and their body contain water also 10% of water vapor in the air comes from the transpiration process in plants.
- 9 Ice crystals and water droplets in clouds fall back again to earth.
Because the gravity force pulls water downward to the Earth surface.
- 10 The occurrence of evaporation process.
When surface water is heated by the sun, the liquid water gain thermal energy from the sun and changes into gaseous state(water vapor).
- 11 Transpiration in plant is a special type of evaporation.
Because plant get rid of excess water in the form of water vapor through stomata on plants leaves.
- 12 The effect of heat is low in the area at the north and south of the equator.
Because the sun rays fall semi-inclined on Earth's surface of these areas, so the weather is warm.
- 13 Hot air moves upward above cold air.
Due to the effect of convection, where hot air has less density, so it rises upward, while cold air has more density and moves down.
- 14 The area near the equator is very hot.
Because the sun rays fall perpendicular on Earth's surface giving high effect of heat.
- 15 Deserts formation.
Due to the descend of dry air to Earth's surface.
- 16 Dry air forms deserts.
Because it is dry and cause drying of land forming deserts.



- 17** The region near the two poles are very cold.
Because the sun rays fall very inclined and distributed on a very large area giving the lowest effect of heat near the two poles.
- 18** Deserts get very little rain.
Due to the higher level of evaporation than the level of precipitation as a result of hot and dry weather.
- 19** The temperature differs around the world.
Due to the unequal distribution of heat from the sun to Earth's surface.
- 20** Feeling very hot at the equator.
Because sun rays fall perpendicular near the equator, concentrated on small area giving high effect of heat.

Question 06

What happens if ?

- 1** The level of water in a lake when the rate of evaporation increases.
The level of water will decrease.
- 2** The snow when sunlight falls on it.
The snow will melt and change into liquid water.
- 3** The weather if the sun rays fall very inclined on an area.
The weather will be very cold.
- 4** A lake is subjected to very hot temperature.
The level of evaporation will increase and it may cause drought.
- 5** Water vapor in air condenses in the sky.
Clouds are formed .
- 6** Water gains high heat energy.
It will chnge from liquid state(water) to gas state(water vapor).



- 7 Evaporation of water in lake increases.
The level of water in the lake will decrease and may cause drought.
- 8 Water runs off the land.
The water flows along Earth's surface into a river and then collected into the oceans or seas.
Put green plant inside plastic bag and expose it to the sun.
- 9 Formation of small water droplet inside the plastic bag due to transportation process.
- 10 Air cools in upper atmospheric layers .
It condenses forming clouds.
- 11 Air near Earth's surface is warmed.
It expands and become less dense and lighter so it rises upwards and cold gas moves down forming convection currents
To the density of air if the cold air is warmed by the effect of solar energy.
- 12 The density of air decreases and warm air rises up.
Place a blue jar with hot water on the top of a red jar with cold water
(relative to mixing colors)
Colors will not mix.
- 14 The difference of air particles temperature (relative to convection currents).
The warm air particles have less density, so it moves upward, while cold air particles have more density, so it moves downward forming a cycle of convection currents.
- 15 Very dry wind blows over an area of the land.
This wind forms a group of deserts around Earth.
- 16 The surface water exposes to high temperature from the sun.
The surface water will gain energy from the sun and it will evaporate changing from liquid form(water) to gas form(water vapor) that rises up to share in the water cycle.



Question 07

Answer the following questions

- 1 Mention the main factors in the water cycle
Thermal energy from the sun and gravity force
- 2 Explain the role of gravity in water cycle in the nature.
Gravity is the force that pulls water in clouds down toward Earth surface causing the precipitation and flowing of liquid water on Earth surface.
- 3 Explain the role of the sun in water cycle in nature .
Thermal energy from the sun cause the change of state of matter during evaporation of water in the water cycle process.
- 4 Explain the importance of ocean currents?
It helps in the formation of clouds and ocean currents. also it helps in determining regional climate.
- 5 Explain The role of the gravity in water cycle in nature.
It causes the falling of melting ice crystals and water droplets found in clouds to Earth's surface. (Precipitation process).
- 6 How does the amount of solar energy effects the transpiration rate of plants?
As the amount of solar energy increases, the rate of transpiration increases. and when the amount of solar energy decreases the rate of transpiration of plants decreases
- 7 What are the main stages of water cycle in nature?
Evaporation, condensation, precipitation.

Question 01

Choose the correct answers



- 1 The density of cold air is.....that of hot humid air.
 (a) **more than** (b) equal to (c) less than (d) similar to
- 2 The side of coastal mountain ranges in which humid air moves up when hitting a mountain is the side, while the other side is the side.
 (a) **wet-dry** (b) dry-wet (c) dry-dry (d) wet-wet
- 3 A rain shadow is an area that is formed behind.....
 (a) Trees (b) building (c) **mountain** (d) bridges



- 4 The density of hot humid air is.....that of cold dry air.
 (a) more than (b) less than (c) equal to (d) similar to
- 5 Coastal mountains range often have two sides which are..... side and.....
 (a) Narrow-wide (b) wet- dry (c) high-low (d) dark-dry
- 6 The amount of water vapor in the air is known as
 (a) humidity (b) evaporation (c) condensation (d) a cloud
- 7 The density of hot humid air is that of cold dry air.
 (a) more than (b) less than (c) equal to (d) similar to
- 8 The air particles density increases at the..... of the mountain.
 (a) top (b) bottom (c) middle (d) higher
- 9 Theeffects on climate and weather.
 (a) mountains (b) kind of soil (c) reservoirs (d) all the previous
- 10 We can describe thethat is very fast
 (a) air density (b) wind (c) humidity (d) temperature
- 11 The weather condition in a short period of time is the
 (a) Humidity (b) Climate (c) Weather (d) Clouds
- 12 Thecan give a report about air condition
 (a) Fireman (b) Meteorologist (c) Astronaut (d) Pilot
- 13 Land heats up.....and cools of compared to that of water.
 (a) quickly-quickly (b) slowly-slowly (c) quickly-slowly (d) slowly-quickly
- 14 If the temperature of the sand in a desert is 50 °C at noon, its temperature may reach.....°C at night.
 (a) 20 (b) 60 (c) 70 (d) 80
- 15 The amount of water vapor in the air is known as.....
 (a) Humidity (b) evaporation (c) condensation (d) the clouds
- 16 is used to measure the current atmospheric pressure.
 (a) Anemometer (b) Barometer (c) Thermometer (d) Rain gauge



Theis the amount of water vapor present in the air.

- (17) (a) air density (b) atmospheric pressure (c) **humidity** (d) temperature

Theis one of the tools that designed to carry measuring tools.

- (18) (a) **weather balloons** (b) barometer (c) rain gauge (d) thermometer

The first step in weather forecast and understand the climate changes is..... process.

- (19) (a) data analyze (b) **data collecting** (c) connecting things (d) using maps

Theis used in determining temperature

- (20) (a) barometer (b) **thermometer** (c) anemometer (d) weather radar

When a liquid is heated, it will.....and become less dense and.....

- (21) (a) expand-heavier (b) contract-lighter (c) **expand-lighter** (d) contract-heavier

When air is heated it's changes.

- (22) (a) mass (b) smell (c) color (d) **density**

All the following instruments are used to measure weather states except

- (23) (a) anemometer (b) **weather balloon** (c) weather radar (d) barometer

The anemometer is used to measure

- (24) (a) adaptation (b) rainfall (c) evaporation (d) **wind speed**

To know whether it rained more this summer or last summer, the meteorologist should use

- (25) (a) barometer (b) **rain gauge** (c) weather radar (d) anemometer

The..... is used in determining wind speed.

- (26) (a) **anemometer** (b) barometer (c) radar (d) thermometer

The increase in the amount of rain for a long period of time mat cause.....

- (27) (a) **flooding** (b) snowfall (c) drought (d) sandstorms

The increase in the amount of rain may cause

- (28) (a) Drought (b) sandstorms (c) dust storm (d) **flooding**



A occurs when strong winds blow up sand from a dry area as deserts .

- 29 ☐ a drought ☐ b desertification ☐ c flood ☐ d **sandstorm**

Sandstorm occur in regions.

- 30 ☐ a polar ☐ b coastal ☐ c **desert** ☐ d ice

Question 02

put (true) or (false)

- | | | |
|----|--|-------------------------------------|
| 1 | A rain shadow is an area that is formed behind trees | <input type="checkbox"/> |
| 2 | There is a very large amount of rain in the desert. | <input type="checkbox"/> |
| 3 | The air density at the top of a mountain is more than that at the bottom of a mountain. | <input type="checkbox"/> |
| 4 | Using solar panels is a way of developing farming methods. | <input checked="" type="checkbox"/> |
| 5 | A rain shadow occurs in the windward side | <input type="checkbox"/> |
| 6 | Weather is an atmosphere condition during long period of time. | <input type="checkbox"/> |
| 7 | All places on Earth receive the same amount of solar energy. | <input type="checkbox"/> |
| 8 | From weather elements humidity percentage and wind speed | <input checked="" type="checkbox"/> |
| 9 | The sand is cooled off in a shorter time than sea water during nighttime. | <input checked="" type="checkbox"/> |
| 10 | The weight of air above a certain area is known as temperature | <input type="checkbox"/> |
| 11 | The spinning of the paper spirals over a turned on lamp indicates the occurrence of convection currents. | <input checked="" type="checkbox"/> |
| 12 | The anemometer is used in determining air pressure | <input type="checkbox"/> |
| 13 | Water reservoirs lose heat slowly | <input checked="" type="checkbox"/> |
| 14 | The barometer is used to determine air pressure. | <input checked="" type="checkbox"/> |
| 15 | The weather radar is used to measure the wind speed | <input type="checkbox"/> |
| 16 | The density of air decreases by increasing temperature | <input checked="" type="checkbox"/> |
| 17 | Sandstorms blow up from a dry area such desert | <input checked="" type="checkbox"/> |
| 18 | Although flooding is harmful, it also has some benefits | <input checked="" type="checkbox"/> |
| 19 | One of the negative effect of sandstorm is the dust fills the irrigation canals, affecting the water quality | <input checked="" type="checkbox"/> |



Question 03

complete the following sentences using words between brackets

- 1 One of the characteristics of desert soil it is a low fertility soil.
- 2 Air pressure at the top of the mountain is lower than air pressure at the bottom of the mountain.
- 3 One of the difficulties that farmers face while farming in the desert is the extreme hot and dry weather
- 4 The very tall mountains often have two sides; one is facing wind and the other is away from wind
- 5 Warm wet air molecules rise up while cold air molecules fall down as a result of convection process.
- 6 Sea water absorbs heat slowly
- 7 Humidity is the amount of water vapor in air.
- 8 The scientist who studies the earth's atmosphere is called meteorologist
- 9 Dust can build up on solar panels as a result of storms, cause disrupting power.
- 10 Devices that carry the measurement tools are weather balloons, satellites and airplanes.
- 11 Using weather map is the most effective way in analyzing the collected data.
- 12 The difference in air temperature of areas that are close to each other affects the speed of wind and air currents.
- 13 Anemometer is used to measure the wind speed.
- 14 When air is heated, it expands, become less dense and rise up.
- 15 Meteorologists use weather radar to track thunderstorms and hurricanes
- 16 At noon, sand get hot in a short time than water
- 17 Radar is used to predict precipitation, thunderstorms, and hurricanes
- 18 Heavy rain for a long period of time, may cause flooding.

Question 04

write the scientific term for each of the following

- 1 A phenomenon that occurs as a result of descending warm and dry air at the dry side of a coastal mountain range **Rain shadow phenomenon**
- 2 A side of mountain ranges at coastal regions that face the coast . **Wet side**



- | | | |
|----|---|------------------------|
| 3 | It is the science of studying and predicting the weather | Meteorology |
| 4 | It is the weight of the air above an area | Atmospheric pressure |
| 5 | A scientist who uses a variety of tools to study and predict the weather | Meteorologist |
| 6 | The weather condition in a long period of time | Climate |
| 7 | A phenomenon occurs when wind blows over mountain's chains | Rain shadow phenomenon |
| 8 | The water vapor existing amount in air | Humidity |
| 9 | The science that studies the weather conditions | Meteorology |
| 10 | The scientist who used a variety of tools and instruments to study and forecast weather. | Meteorologist |
| 11 | It is the weight of the air above an area | Air pressure |
| 12 | A device used to measure atmospheric pressure | Barometer |
| 13 | A device that is used in measuring the volume and speed of rain fall | Weather Radar |
| 14 | The amount of force that air affects on the surrounding environment | Air pressure |
| 15 | The amount of water vapor that present in air. | Humidity |
| 16 | A device is used in tracking hurricanes and storms. | Weather radar |
| 17 | A device is used in determine air pressure | Barometer |
| 18 | It's a natural phenomenon that occurs when the level of water in a river increases until it overflows its banks | Flood |
| 19 | Several shortage of water available in an area. | Drought |
| 20 | Strong winds carry sand and dust blow up from an extremely dry area | Sandstorm |
| 21 | Water flows over the edge of the riverbank and onto the land | Flood |
| 22 | The land suddenly floods with water | Flood |

Question 05

Give reason for each of the following

- 1 Snow forms on the top of the mountain, while the water remains liquid at the bottom.
Because temperature decreases at the top of mountain, while it increases at the bottom of mountain



- 2 Air movement (in the term of temperature)
As the air temperature increases it becomes less dense and moves upward, while the cold air becomes more dense and moves down ward. These movements create a cycle of air currents.
- 3 Plants grow slowly in the windless area of the mountain.
Because the windless area of the mountain is dry and has little amount of rain.
- 4 It is suitable to cultivate in the mountain on the side that facing wet air.
Due to precipitation of rain at this wet side that allow plants to grow.
- 5 Meteorologists represent weather forecasts as probability ratio.
Because sometimes unexpected and quick changes can affect the weather of next days or weeks.
- 6 When hot air loses its heat, it descends.
Because it contracts as its molecules come close to each other, becomes more dense and moves down.
- 7 Snow fall in some places.
Because in these places the air in clouds is cold enough to change the water droplets into ice
- 8 The spinning of the paper spirals over a turned-on-lamp.
Because of the heat from the light bulb that heats the air around the lamp and causes it to expand, becomes less dense and moves up ward causing the paper spiral to spin.
- 9 Weather forecasting is difficult and meteorologists may not be able to make accurate predictions.
Because of the unexpected and quick changes that may occur in the weather conditions.
- 10 Sandstorms have harmful effects on human health
Because sandstorms harm the human eyes and respiratory system.
- 11 The dangerous of flooding increases if the land is frozen
Because the frozen ground cannot absorb water.



Question 06

What happens if ?

- 1 The atmospheric pressure, as we move up toward the top of a mountain
The atmospheric pressure will decrease
- 2 The air density, as we move down toward the bottom of the mountain.
The air density will increase
- 3 The air cools and water vapor condense at the sky.
The water vapor changes into tiny droplets of water forming clouds.
- 4 The amount of water vapor in the air increases.
Humidity increases and air becomes hot and humid.
- 8 Sand and water at night after they exposed to sunlight at the day.
Sand cools down faster than water.
- 9 Putting a lit lamp is placed 5cm away from a beaker contains sand and another beaker contains the same amount of water.
The beaker containing sand will heat up faster than the beaker containing water.
- 10 The sever decreasing in temperature in some places.
The precipitation will be in the form of snow which is known as snowfall.
- 11 Dust can build up on solar panels surfaces.
Solar panels stop generating electricity.
- 12 Putting a lit lamp is placed 5cm away from a beaker contains sand and another beaker contains the same amount of water.
The beaker containing sand will heat up faster than the beaker containing water.
- 13 The water movement when boiling it in a pot.
Hot water moves up and cold water falls down.
- 14 Air near Earth's surface is warmed.
It expands and becomes lighter (less density) so it rises upward and cold gas moves down form convection currents



To the density of air if the cold air is warmed by the effect of solar energy.

15

The density of air decreases and warm air rises up

Rising higher in relation to atmospheric pressure and temperature.

16

Atmospheric pressure and temperature decrease as we rise higher.

Placing a paper spiral over a turned-off-lamp.

17

The paper spiral will not move.

If the dust accumulates on solar panels.

18

Solar panels will stop generating energy.

The ice melts suddenly.

19

Flood may occur.

The weather is dry for a long time.

20

Drought may occur.

Question 07

Answer the following questions

CONCEPT
4.1

1

Mention the effects of drought

Shortage of water for people, animals and plants

2

Mention the effects of Sandstorm:

Decreases the visibility for drivers - Accumulates on solar panels and stop generating energy - Fills up irrigation canals so, the water quality decreases - Harms the human eye and respiratory system

3

Mention the effects of Flooding

Damaging of buildings by moving or breaking them. (Negative) - Death of people and animals. (Negative) - Harming of economy. (Negative)

Some eco systems depend on periodic flood such as ecosystems along the Nile (Positive)

4

Mention the importance of Barometer

it is used to measure air pressure

5

Mention the importance of Weather Radar

It detects the intensity and speed of precipitation and tracks thunderstorms and hurricanes.



- 6 Mention the importance of Weather balloons
It is used to carry measuring instruments high in the atmosphere to measure conditions of weather from different altitudes.
- 7 Explain methods that farmers created to overcome desert soil.
improve soil quality - irrigate crops by reusing water - use solar energy or wind turbines to power farms.
- 8 What is the reason the occurrence of sandstorms
Sand storm occurs when very strong wind blows up sand or dust from a dry area such as desert
- 9 A farmer noticed a heavy rainfall on his farm and he wanted to determine the amount of rain in this area. What device is used for that?
Rain gauge.
- 10 Mention the main stages of the weather forecasting process.
1-Collecting Data 2-Analyzing Data 3-Putting it all together

Question 01

Choose the correct answers

- 1 Dorcas gazelle lives in.....
☐ a tropical area ☒ b desert area ☐ c north pole ☐ d south pole
- 2 The Red Sea in Egypt includes all of the following environments, except.....environment.
☐ a marine ☐ b mountain ☒ c rainforest ☐ d Coastal
- 3 All the following are biotic factors except.....
☐ a animals ☐ b insects ☒ c precipitation ☐ d grass
- 4 Poison dart frog lives in.....environment.
☐ a Arctic ☒ b tropical rain forest ☐ c desert ☐ d Antarctic
- 5 All the following are from abiotic factors in an ecosystem except.....
☐ a air ☐ b sun light ☐ c water ☒ d plants
- 6 Water, sunlight, and air are examples of factors in the ecosystem.
☐ a biotic ☐ b living ☒ c non-essential ☐ d abiotic



- 7 Abiotic factors in an ecosystem include
- a animals and air b grasses and soil c Non-living things d living organisms
- 8 All the following are from biotic factors in an ecosystem except
- a human b plants c animals d soil
- 9 Which of the following is not considered from the abiotic factors
- a Light b Water c Temperature d Plant
- 10 From the behavioral adaptations is
- a Thick skin b Fur c Long ears d Bird migration
- 11 All the following are inherited traits in humans except,
- a eye color b nose shape c fur color d ear shape
- 12 Genes are tiny structures that found in.....
- a cell nucleus b cell membrane c cell wall d mitochondria

Question 02

put (true) or (false)

- 1 Thorns on a plant stem, is an example of structural adaptation. ☒
- 2 Birds migrate to areas that have no water or food. ☒
- 3 Offspring receive their environmental factors from their parents. ☒
- 4 Genes carry inherited traits from parents to their offspring ☒
- 5 The structural adaptations of an organism are related to the structure of its body. ☒
- 6 Around each eye of Emperor penguin, there is a circle of skin that does not have any feathers. ☒
- 7 Ecosystems contain biotic factors and abiotic factors. ☒
- 8 Biotic factors of an ecosystem include sunlight, air and water ☒
- 9 The amount of light affects the growth of plants. ☒
- 10 Chrysanthemum plant can produce flowers when the nights are longer than days. ☒
- 11 African penguin has thick blubber and dense feathers to keep its body warm ☒



- 12 Abiotic factors affect the growth and the adaptation of biotic factors. ✓
- 13 Deserts may be hot or cold areas. ✓
- 14 The size of the organism's natural habitat does not affect its growth ✗
- 15 The size of a living organism is one of the traits that is not affected by genetic factors. ✗
- 16 The body of the emperor penguin is covered with a thin layer of skin to overcome the low temperature ✗
- 17 All living organisms inherited traits from their parents ✓
- 18 Sphinx cat doesn't have the genetic factor for long silky hair ✓
- 19 There is no sphinx cat has long hair like Birman cat ✓

Question 03

complete the following sentences using words between brackets

- 1 The **genes** carry inherited traits from parents to their offspring.
- 2 The adaptation that is related to the body structure of living organism is known as **structural adaptation**
- 3 Food, water and **habitat** the basic needs for living organisms to live and survive
- 4 Some desert plants have thick leaves to store **water**.
- 5 Thick fur is an example of **structural** adaptation for animals that live in polar climate.
- 6 Photosynthesis process is affected by some environmental factors such as **water and sunlight**.
- 7 The process by which an organism becomes more able to survive in its environment is called **adaptation**.
- 8 The sunlight, soil, temperature and precipitations are examples for **abiotic** factors
- 9 The palm tree adapts with **shortage** of water in the desert.
- 10 Fish migration is considered one of the **behavioral** adaptations.
- 11 From the environmental factors affecting living organisms are **air** and **water**.
- 12 The leaves of plants in the Western Desert are **small**
- 13 All living organisms inherited **genetic** factors which transferred from parents to their offspring.



- 14 The way of your earlobes hang and the length of your fingers are two inherited traits controlled by **genes** that are found in the cell nucleus.
- 15 It is considered **moderate climate** one of the reasons for birds returning to their habitat.

Question 04

write the scientific term for each of the following

- | | | |
|----|--|-----------------------|
| 1 | A process through which the living organisms be able to live and survive in its environment. | Adaptation |
| 2 | The change in the act of living organism to help it survive. | Behavioral adaptation |
| 3 | The seasonal migration of animals from one place to another and considered a behavioral adaptation. | Migration |
| 4 | The process by which a living organism becomes capable of living in an environment in a way that enables its survival. | Adaptation |
| 5 | It contains biotic factors and abiotic factors that interact with each other. | Ecosystem |
| 6 | The factors that include living organisms in an ecosystem | Biotic factors |
| 7 | A desert biome that has a cold temperature all the year | Antarctica |
| 8 | They are responsible for determining the body feature, and present in the cell nucleus | Genes |
| 9 | It is the factor that controls which trait get inherited from parents to their offspring | Genetic factors |
| 10 | Factors that determine the structure and characteristics of a living organism and are passed from parents to offspring | Genetic factors |
| 11 | They are the living organisms in the ecosystem, such as plants and animals. | Biotic factor |
| 12 | A behavior or any way acts by a living organism to survive. | Behavioral adaptation |

Question 05

Give reason for each of the following

- 1 Falcons and eagles migrate to Egypt in winter.
Because Egypt in winter has moderate climate conditions
- 2 Birds migrate from one place to another place.
To search for food and suitable habitat to reproduce



- 3 Plants in desert are adapted to survive in extreme conditions.
Because they have genetic factors that help them to adapt the extreme conditions.
- 4 How can the Dorcas gazelle camouflage in the desert?
By using its fur color which is similar to the surrounding environment to hide from predators.
- 5 Some plants that live in a desert ecosystem have long roots.
To get the deep groundwater
- 6 Poison dart frog has colorful poisonous skin.
To hide and to protect itself from predators.
- 7 Desert plants have thick stems or leaves.
To store water.
- 8 How do the environmental factors affect the growth of living organisms?
The basic environmental factors —that affect the growth of living organisms are water, sunlight, food, air and habitat, if the living organism did not meet its needs it cannot survive and will die.
- 9 Plants manage to adapt to warm and dry climates?
Because they have some adaptations that help them adapt in the warm and dry weather such as: thick stems and leaves to store water, short and extended roots to absorb any water, thorns to avoid herbivores and their size is short and herbal.
- 10 Sphynx cat doesn't have long hair.
Because it doesn't have the genetic factor for long hair.

Question 06

What happens if ?

- 1 Water and light are not available.
Living organisms can't survive and will die
- 2 The plants in an ecosystem, if they receive too intense light.
The too intense light may damage the plant's parts and cause their drying or burning.



- 3 If water and light are not available.
Living organisms can't survive and will die
- 4 Rain falls on desert in suitable quantities.
Farming desert becomes easier.
- 8 If the poison dart frog doesn't have big eyes.
It will be difficult for them to avoid predators and to locate preys.
- 9 If the Arctic fox does not have a thick fur.
It cannot keep its body warm at low temperatures and cannot adapt and survive.
- 10 Lack of light for plant growth
Plants cannot make photosynthesis process and will die.

Question 07

Answer the following questions

- 1 Explain the reasons for bird migration?
Birds migrate searching for: -the best conditions that help them reproduce - Different food resources - Suitable new habitat
- 2 How do genetic factors affect the growth of living organisms?
Genetic factors determine the inherited traits such as length of the plant, color of animal fur and body size, so it affects how an organism's structure and behavior develop and respond to its environment.
- 3 Identify some traits of a living organism that are determined by genetic factors?
The length of plants - body size of animals - fur colors of animals.
- 4 Mention the different environmental factors that help living organisms to grow?
The environmental factors that help living organisms to survive are sunlight, air, water, food and soil and the living organism cannot survive if they do not meet their needs.



Question 01

Choose the correct answers

 CONCEPT
4.2

- 1is the loose layer that covers Earth's crust.
 (a) Humus (b) Water (c) Soil (d) Air
- 2 All the following are from organic ingredients of soil, except.....
 (a) fungi (b) dead plants (c) water (d) rocks
- 3 The soil provides the plant with all the following, except.....
 (a) water (b) nutrients (c) air (d) sunlight
- 4 The material rich-in nutrients and produced from the decomposition of dead organisms is
 (a) decomposer (b) humus (c) water (d) sand
- 5 From organic materials which is found in the soil.....
 (a) Air (b) water (c) rocks (d) humus
- 6 Form the components that are not found in the soil
 (a) living organisms (b) minerals (c) water and air (d) sunlight
- 7 The arrangement of soil types according to the size of soil particles from largest to smallest is
 (a) sand, silt, clay (b) silt, sand, clay (c) clay, sand, silt (d) sand, clay, silt
- 8 From organic materials which is found in the soil
 (a) Air (b) Water (c) Rocks (d) humus
- 9 The color of sand soil is.....
 (a) yellow (b) black (c) grey (d) red.
- 10 soil holds water well so, it becomes.....most of the time.
 (a) Sand-wet (b) Clay-wet (c) Clay-dry (d) Silt -dry
- 11 Bogs contain..... soil that retains amount of water.
 (a) silt-medium (b) sand-large (c) clay-large (d) clay-medium
- 12 Savannas are..... ecosystem.
 (a) wet polar (b) wet grassland (c) dry polar (d) dry grassland



- 13 The color of sand soil is.....
 (a) yellow (b) green (c) white (d) black
- 14 The Bog ecosystem has soil.
 (a) Sand (b) gravel (c) clay (d) silt
- 15 Soil with large spaces between its particle is characterized by the ability to allow water to flow through it and retain it
 (a) slowly-well (b) quickly- well (c) quickly-poorly (d) slowly – poorly
- 16 Silt soil contains particles and its color is
 (a) Large- yellow (b) Large-dark (c) medium- dark (d) Medium-gray
- 17is the form of invasive species that are found in the red sea.
 (a) Emperor penguin (b) Poison dart frog (c) Lion fish (d) Lizard
- 18 The change in climate leads to the of some living organisms
 (a) increase (b) extinction (c) reproduction (d) pollution
- 19 Traditional bricks and concrete must be burned at temperature and produce amount of pollution.
 (a) high-small (b) high-large (c) low-large (d) low-small

Question 02

put (true) or (false)

- 1 All types of soil are similar in color and structure ☒
- 2 The size of sand particles is smaller than silt and clay particles ☒
- 3 Sandy soil has small-sized particles ☒
- 4 Soil is important for animal only ☒
- 5 Soil is the home of some living organisms ☒
- 6 If you examine a sample of soil, you will see only one type of ingredients in it ☒
- 7 Inorganic ingredients make up more than half of all soil types ☒
- 8 The size of sand particles is smaller than that of silt particles ☒
- 9 Water flows through sand soil faster than in clay soil ☒



- 10 The glue-like substance which is used in binding materials together is formed from the chemical change of the topsoil ☐
- 11 The difference sand soil and clay soil in the color only. ☐
- 12 Clay soil retains more amount of water than the sand soil ☒
- 13 Soil differs in their color and their ability to hold water ☒
- 14 All types of soil are similar in color and the texture ☐
- 15 Algae is a type of plant that likely grows in dry, porous soil ☐
- 16 Natural changes can benefit the soil ☒
- 17 Converting fertile agricultural lands into cities leads to increase the deforestation of the land. ☒
- 18 Desertification is a process by which land becomes more fertile ☐
- 19 Lionfish is from the native species in the Red Sea areas ☐
- 20 Desertification process is due to drought or overgrazing ☒
- 21 To prevent water pollution, laws must be applied ☒

Question 03

complete the following sentences using words between brackets

- 1 The two processes related to the disintegration of rocks and minerals that make up soil are weathering and erosion.
- 2 Over uses of chemical fertilizers cause depletion of the soil.
- 3 The building units of rocks are called minerals
- 4 The processes that play an important role in the soil formation are erosion, weathering and deposition.
- 5 According to the size of particles in the soil, sand are the biggest particles, while clay are the smallest particles
- 6 The thin layer which covers the earth's crust is called soil
- 7 The building unit of rocks is minerals
- 8 From the components that are not found in the soil Sunlight
- 9 Humus is formed from the decomposition of dead organisms' remains
- 10 The two processes related to the disintegration of rocks and minerals that make up soil are weathering and erosion
- 11 During rainfall, the soil of humid areas retains large amount of water
- 12 Clay soil can retain more amount of water while sand soil can retain small amount of water



- 13 Sandy soil allows water to flow fast while **clay** soil allows water to flow slowly
- 14 Sandy soil is **dry** and loose soil, so large trees can't grow in it
- 15 Increasing the inclination of the land leads to the increase of **erosion** process of the soil.
- 16 In the Red Sea, lion fish is considered as **invasive** species that harm the native species
- 17 Human activities cause the increase in **carbon dioxide** gas percentage and lead to the increase in Earth's **temperature**
- 18 Food, water and **habitat** the basic needs for living organisms to live and survive

Question 04

write the scientific term for each of the following

- | | |
|--|--------------------|
| 1 The loose layer that covers Earth's surface | Soil |
| 2 The building blocks of rocks | Minerals |
| 3 The process that breaks down rock into small particles | Weathering |
| 4 The spaces between soil particles. | Pore spaces |
| 5 The distance between the particles of the soil | Pore spaces |
| 6 Living organisms help in recycling nutrients from dead plants and animals back to the soil | decomposers |
| 7 The dark(black) soil that can retain large amount of water | Clay soil |
| 8 A type of soil retains medium amount of water and has medium pore spaces between its particles | Silt soil |
| 9 Grassland ecosystem that contains dry sand soil and are common in central Africa | Savannah |

Question 05

Give reason for each of the following

- 1 Decomposers have an important role in the formation of soil.
They recycle remains of dead organism into chemical nutrients (carbon – nitrogen and oxygen) and decomposers break down organic materials of dead bodies into humus which increases soil fertility
- 2 Water can flow very fast through sand soil.
Because it has large amount of pore spaces between its particles



- 3 Clay soil can retain more amount of water.
Because it has small amount of pore spaces between its particles
- 4 Desertification process increases recently.
Due to deforestation, drought and overgrazing
- 5 Volcanic eruptions have a beneficial role in a habitat.
Because it makes the soil fertile
- 6 We should keep green areas and reduce the amount of fertilizers.
To reduce water pollution
- 7 Lack of light for plant growth.
Plants cannot make photosynthesis process and will die.

انتهت الأسئلة مع أطيب الامنيات بالنجاح



كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



حمل الآن

مجانا وحصريا

المراجعة رقم (2)

الترم الثاني



Pony Revision on Unit 3 – Concept 1

The Water Cycle

First, Second,
and Third Weeks

1 Choose the correct answer:

1. Flamingos feed on
a. weed b. algae c. grass d. trees
2. causes liquid water to percolate down into the ground.
a. Heat energy b. Wind c. Gravity d. Friction
3. The transfers energy between water reservoirs on the Earth's surface.
a. heat energy b. wind c. gravity d. friction
4. The three main processes that make up the water cycle are
a. melting, condensation, and evaporation
b. melting, runoff, and condensation
c. evaporation, condensation, and precipitation
d. precipitation, runoff, and evaporation
5. Evaporation refers to the transformation of water from a state to a state.
a. liquid – solid b. solid – liquid c. liquid – gaseous d. solid – gaseous
6. Transpiration represents of the water vapor in the air.
a. 5% b. 10% c. 20% d. 40%
7. forms when many tiny water droplets accumulate together.
a. Rain b. A cloud c. Water vapor d. A fog
8. The water changes from a liquid to a gas by the process.
a. melting b. condensation c. evaporation d. freezing

2 Put (✓) or (x):

1. Flamingos immigrated to Salt Lake in Turkey, but it suddenly dried up. ()
2. Flamingos feed on algae in fresh water. ()
3. Climate change affects the breeding of flamingos. ()
4. The drop of water level in lakes occurs as a result of evaporation. ()
5. Solar energy is distributed in equal amounts on the Earth's surface. ()
6. Evaporation is the transformation of water from a liquid to a gas. ()
7. The runoff is the flow of water under the Earth's surface after precipitation. ()

8. Oceans are the main source of evaporation in the water cycle. ()
9. Climate change affects the water cycle. ()
10. The water cycle conserves the water percentage on Earth. ()
11. The volume of water in a puddle increases by increasing the runoff. ()
12. The evaporation process occurs by losing energy. ()
13. Wind transfers energy between water reservoirs on the Earth's surface. ()
14. The cold air is replaced by the hot air. ()
15. Transpiration from plants' leaves decreases in the morning. ()
16. In the condensation process, water vapor gains energy. ()
17. The water cycle is the movement of water between different reservoirs. ()
18. Evaporation occurs as a result of gaining heat energy. ()
19. Small lakes dry as a result of the runoff. ()
20. Condensation occurs when a gas is heated and is turned into a liquid. ()
21. The convection currents in the atmosphere help in determining regional climates. ()
22. Condensation process is turning hot water into water vapor. ()
23. The wind is formed by cold air rising upward, then replaced by hot air. ()
24. Earth's rotation is a reason for the wind direction determination. ()
25. Heat transfers from hot water to cold water. ()
26. The convection currents move horizontally. ()
27. Warm, moist air is denser than cold one. ()

3 Complete the following sentences:

1. The water level of a lake decreases as a result of
2. The most important source of energy in the water cycle is
3. The environmental challenges that face flamingos include
4. Solar energy may distribute to regions and regions.
5. The two basic factors for the water cycle are and
6. The water state changes in the water cycle by and energy.
7. The processes in water reservoirs that require energy gain are and



8. The processes that require the loss of energy from water in reservoirs are and
9. The moist air contains a large amount of
10. When a gas or a liquid is heated, its density
11. The air rises up.
12. The weather of the regions near the equator is more
13. The drives the cycle of the wind around Earth.
14. Water moves on Earth among
15. The air goes down.
16. Tiny water droplets have condensed out of the air, forming
17. The convection currents move in a direction.
18. When we put a blue jar with hot water on the top of a red jar with cold water, the colors
19. Warm, moist air is dense than cold, dry air.
20. Cold gases are dense than warm gases
21. The air forms deserts.
22. The regions near the are very hot.

4 Write the scientific term:

1. It is the process that allows water to enter the atmosphere in the form of water vapor. (.....)
2. It is a process in which plants get rid of excess water in the form of water vapor through the pores. (.....)
3. It is the process that occurs when the water droplets forming the clouds become heavier and fall down by gravity. (.....)

5 Give reasons for:

1. Ice crystals and water droplets in clouds fall back again to the Earth.
.....
.....

2. Water percolates down into the ground.
.....
.....





3. Living organisms are considered a part of the water cycle on the Earth's surface.

4. Deserts get very little rain.

5. Deserts are formed.

6. The evaporation process occurs.

7. The temperature differs around the world.

8. The regions near the two poles are very cold.

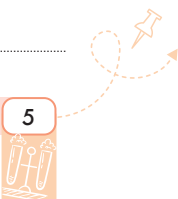
9. The regions near the equator are very hot.

6 What happens if:

1. Water gains high heat energy?

2. The evaporation of water in a lake increases?

3. A lake is subjected to a very hot temperature?





4. The surface water is exposed to high temperature from the Sun?

.....

5. Water runs off the land?

.....

6. You place a blue jar with hot water on the top of a red jar with cold water?

.....

7. Very dry wind blows over an area of the land?

.....

8. There is a difference of air particles temperature (relative to the movement of the air)?

.....

.....

.....

7 Answer the following questions:

1. Explain the role of the Sun in the water cycle in nature.

.....

.....

.....

.....

2. Explain the role of gravity in the water cycle in nature.

.....

.....

.....

.....

.....

.....

.....



3. How does the amount of solar energy affect the transpiration rate of plant leaves?

.....

.....

4. What is the relation between convection and condensation?

.....

.....

5. Explain: Convection currents are important.

.....

.....

.....

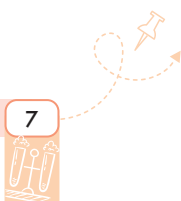
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6. Explain: the role of the Sun in the wind movement.

.....

.....

.....



1 Choose the correct answer:

- The is the amount of water vapor present in the air.
a. air density **b.** atmospheric pressure
c. humidity **d.** temperature
- A/An is used in determining the wind speed.
a. anemometer **b.** barometer **c.** radar **d.** thermometer
- The air particles density increases at the of the mountain.
a. top **b.** bottom **c.** middle **d.** height
- The is one of the tools designed to carry the measuring tools.
a. weather balloons **b.** barometer
c. rain gauge **d.** thermometer
- When heating equal amounts of sand and water, the water is heated the sand.
a. faster than **b.** slower than
c. similar to **d.** no correct answer
- When holding a paper spiral over a lit lamp, the paper spiral
a. burns **b.** doesn't spin
c. spins **d.** no correct answer
- The device is used to record the wind speed.
a. barometer **b.** thermometer
c. weather radar **d.** anemometer
- To determine the amount of rain falling, we use the
a. weather radar **b.** rain gauge
c. barometer **d.** weather balloon
- The is used in determining the air pressure.
a. anemometer **b.** rain gauge
c. barometer **d.** weather balloon
- Warm air molecules move
a. backward **b.** downward **c.** forward **d.** upward

11. Sandstorms occur in regions.
 a. polar b. coastal c. desert d. ice
12. All of the following are flood damages, except
 a. moderate weather b. livestock drowning
 c. damaging buildings d. disrupting the economy
13. The drought occurs due to the
 a. moderate temperature b. high temperature
 c. low temperature d. both a and c
14. The first step in weather forecasting and understanding climate change is the process.
 a. data analysis b. data collection
 c. connecting things d. maps usage
15. The affect the climate and weather.
 a. mountains b. kinds of soil
 c. reservoirs d. all the previous
16. We can describe that is very fast.
 a. air density b. wind
 c. humidity d. temperature
17. The weather condition in a short period of time is the
 a. humidity b. climate c. weather d. clouds
18. The can give a report about air conditions.
 a. fireman b. meteorologist c. astronaut d. pilot
19. helps in returning ice crystals back to the land.
 a. The Sun b. Gravity
 c. The moon d. Thermal convection
20. The is used in determining the temperature.
 a. barometer b. thermometer
 c. anemometer d. weather radar
21. Dust storms occur when very strong winds blow dust from areas experiencing extreme
 a. humidity b. drought c. ice d. fog

**2 Put (✓) or (x):**

1. Using solar panels in deserts is a way of developing farming methods. ()
2. A rain shadow occurs in the windward side. ()
3. The atmospheric pressure decreases as we go higher. ()
4. Weather is an atmospheric condition during a long period of time. ()
5. The atmospheric properties at the top of a mountain differ from those at the bottom. ()
6. Sand loses heat faster than water. ()
7. Cold air is denser than warm air. ()
8. Water reservoirs lose heat slowly. ()
9. In deserts, temperature during the day and the night are very high. ()
10. The barometer is used to determine air pressure. ()
11. All places on the Earth's surface receive the same amount of sunlight, which causes the diversity of climate. ()
12. The spinning of the paper spirals over a turned-off lamp indicates the occurrence of convection currents. ()
13. Water loses its heat slower than sand. ()
14. The anemometer is used in determining the air pressure. ()
15. Heavy rain causes the destruction of ecosystems. ()
16. Drought is the rise of water level above the riverbank. ()
17. One of the negative effects of sandstorms is that dust fills the irrigation canals, affecting water quality. ()
18. One of the drought causes is the severe decrease in the temperature. ()
19. Floods occur as a result of very dry sandstorms. ()
20. Humidity percentage and wind speed are from weather elements. ()
21. The density of warm air increases because its molecules expand. ()

3 Complete the following sentences:

1. When air is heated, it
2. The thermometer is used in measuring



3. Devices that carry the measurement tools are _____, _____, and _____.
4. Using _____ is the most effective way in analyzing the collected data.
5. Very tall mountains often have two sides, one is _____ the wind and the other is _____ from the wind.
6. One characteristic of desert soil is its _____ fertility.
7. One of the difficulties that farmers face while farming in the deserts is _____.
8. The air pressure at the top of the mountain is _____ than the air pressure at the bottom of the mountain.
9. Meteorologists use _____ to track thunderstorms and hurricanes.
10. The _____ device is used in determining the air pressure.
11. One of the negative effects of drought is that _____.
12. The reasons of flood occurrence are _____ or _____.
13. In the data analysis stage, we use _____ to represent data and share information.
14. Sandstorms occur in the _____ areas.
15. One of the causes of droughts is _____.
16. One of the difficulties that faces farming in the deserts is the _____.
17. Rain may fall down in a form of _____, _____, and _____.
18. Warm air molecules rise up, while cold air molecules fall down as a result of _____.
19. _____ occurs due to the sudden melting of ice.
20. _____ occur due to an extreme increase in the temperature and lack of water.
21. _____ can build up on solar panels as a result of storms, causing power disruptions.



4 Write the scientific term:

1. It is the weight of the air above a location. (.....)
2. It is the amount of force that air affects on the surrounding environment. (.....)
3. It is the amount of water vapor present in the air. (.....)
4. It is the science of studying and predicting the weather. (.....)
5. He is the scientist who uses different tools to study and predict weather. (.....)
6. It is a device that is used in measuring the volume and the speed of rain fall. (.....)
7. It is the severe shortage of water available in an area. (.....)
8. They are strong winds that carry sand and dust, blowing up from extremely dry areas. (.....)
9. He is a scientist who uses a variety of tools to study and predict the weather. (.....)
10. It occurs when the water level increases over the edge of a riverbank and flows onto the lands around the river. (.....)
11. It is the weather condition in a long period of time. (.....)
12. It is a phenomenon that occurs when wind blows over a mountain's chains. (.....)
13. It is a device used in tracking hurricanes and storms. (.....)
14. It is the amount of water vapor existing in air. (.....)
15. It is a device used in determining air pressure. (.....)

5 Mention the importance of:

1. Weather balloons

.....
.....

2. Weather radar

.....
.....



**5 Give reasons for:**

1. Snowfall occurs in some places.

.....

.....

2. Weather forecasting is difficult and meteorologists may not be able to make accurate predictions.

.....

.....

3. The paper spirals spin over a turned-on lamp.

.....

.....

4. The dangers of flooding increase if the land is frozen.

.....

5. Snow forms at the top of a mountain but it is still liquid at the bottom of the same mountain.

.....

6. Plants grow slowly in the windless area of the mountain.

.....

7. Air pressure decreases at the top of mountains.

.....

.....

8. It is suitable to cultivate in the mountain on the side facing the wet air.

.....

.....

6 Explain the scientific reason:

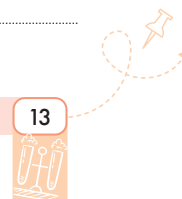
1. When hot air loses its heat, it descends.

.....

.....

2. Snow forms on the top of the mountain while the water remains liquid at the bottom.

.....





3. Meteorologists represent weather forecasts using probability ratios.

.....

.....

7 What happens when:

1. We rise higher from the Earth in relation to the atmospheric pressure and temperature?

.....

2. The air cools and water vapor condenses at the sky?

.....

.....

3. The amount of water vapor in the air increases?

.....

6 What happens:

1. If a lit lamp is placed 5 cm away from a beaker containing sand and another beaker containing the same amount of water? (In terms of which one heats up faster)

.....

2. When you place a paper spiral over a turned-off lamp?

.....

3. To sand and water at night after they are exposed to sunlight at the day?

.....

4. To sand and water at the day after they are exposed to sunlight?

.....

5. If the ice melts suddenly?

.....

6. If the weather is dry for a long time?

.....

7. If dust accumulates (builds up) over solar panels?

.....

8. If a lit lamp is placed 5 cm away from a beaker containing sand and another beaker containing the same amount of water? (In terms of which





one heats up faster)

9. When you place a paper spiral over a turned-off lamp?

10. To sand and water at night after they are exposed to sunlight at the day?

11. To sand and water at the day after they are exposed to sunlight?

12. If the ice melts suddenly?

13. If the weather is dry for a long time?

14. If dust accumulates (builds up) over solar panels?

8 Mention the main stages of studying and forecasting weather.

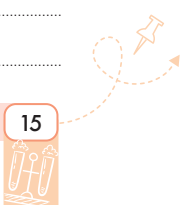
7 Answer the following questions:

1. What are the main stages (processes) of the water cycle in nature?

2. Mention the three main stages that meteorologists follow to study weather forecast.

3. What is the result of the severe decrease in temperature in some places?
(In terms of precipitation)

4. Explain methods that farmers created to overcome desert soil.





5. A farmer noticed heavy rainfall on his farm and he wanted to determine the amount of rain in this area. What device is used for that?

.....

6. What is the reason for the occurrence of sandstorms?

.....

.....

7. Mention the negative effects of sandstorms.

.....

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8. Mention the negative effects of flooding.

.....

.....

9. Mention the effects of drought.

.....

.....



Pony Revision on Concept 4.1

Adapting to Survive

Ninth and
Tenth Weeks

1 Choose the correct answer:

1. Which of the following is not considered from the abiotic factors?
a. Light **b.** Water **c.** Temperature **d.** Plants
2. The behavioral adaptations include
a. thick skin **b.** fur
c. long ears **d.** bird migration
3. Which of the following does not help plants survive in desert environments?
a. Their thorns **b.** Their thick roots
c. Excessive transpiration **d.** Their small leaves
4. The adaptation of living organisms with the environment leads to
a. their extinction **b.** their survival
c. their population decrease **d.** their migration
5. The help(s) the cell to build genetic information between generations.
a. nucleus **b.** mitochondria **c.** chloroplasts **d.** vacuoles
6. The traits control the shape of the cat's pointed ear.
a. environmental **b.** abiotic **c.** genetic **d.** living
7. Some plants, such as, bear fruits when the daytime is shorter than the nighttime.
a. chrysanthemum **b.** cactus
c. herbaceous plants **d.** flowering plants
8. The Birman cat belongs to the
a. wild cats **b.** domestic cats
c. Pharaoh cats **d.** desert cats
9. All of the following are behavioral adaptations, except
a. migration **b.** living in burrows
c. the thorns on plants' leaves **d.** photosynthesis in plants





10. All of the following are structural adaptations, except the
- a. size of the plants' leaves
 - b. direction of plants' growth
 - c. thorns on the plants' leaves
 - d. stem length
11. All of the following are lifestyles, except
- a. smoking
 - b. healthcare services
 - c. diet
 - d. exercise

2 Put (✓) or (✗):

1. The color of the fur is considered a structural adaptation. ()
2. The size of an organism's natural habitat does not affect its growth. ()
3. The size of a living organism is one of the traits that is not affected by the genetic factors. ()
4. The body of the emperor penguin is covered with a thin layer of skin to overcome the low temperature. ()
5. The unhealthy environment positively affects human life. ()
6. Height and skin color are considered abiotic factors that affect human life. ()
7. Following a diet is one of the life choices that influence human growth. ()
8. Light is considered a hereditary factor influencing the life of plants and animals. ()
9. The Sphinx cat is characterized by its abundant fur. ()

3 Complete the following sentences:

1. Air is considered one of the factors.
2. Palm trees adapt to the of water in the desert.
3. Fish migration is considered one of the adaptations.
4. From the environmental factors affecting living organisms are and
5. The adaptation of the organism is related to its body structure.
6. The thorns on the stems of some plants are considered adaptations.
7. The leaves of plants in the Western Desert are
8. is one of the reasons for birds returning to their habitat.
9. The plant grows when the daytime is shorter than the nighttime.



10. Light is considered one of the factors.
11. The factors that influence the formation of the human internally and externally are,, and
12. The Sphinx cat and the Birman cat belong to the cats.
13. The of the cell carries the genetic genes.
14. The survival of living organisms despite difficult conditions is related to the factors.

4 Write the scientific term:

1. It is the seasonal migration of animals from one place to another and is considered a behavioral adaptation. (.....)
2. It is a process in which a living organism is able to live in a way that enables it to survive. (.....)
3. They are factors that determine the structure and characteristics of a living organism and are passed from parents to offspring. (.....)
4. They are the living organisms in the ecosystem, such as plants and animals. (.....)
5. It is a behavior or an act performed by a living organism to survive. (.....)
6. It is an environmental factor that affects plant growth and food formation. (.....)
7. They are plants that give fruits when the days are longer than the nights. (.....)
8. They have the information that is transmitted from the cell nucleus to the next generations. (.....)
9. They have the information and traits that determine the characteristics of a living organism and are passed from parents to offspring. (.....)
10. It is a plant that grows faster when the daytime is shorter than the nighttime. (.....)
11. It is an organelle in the cell that is responsible for reproduction and the construction of cell-specific information. (.....)



5 Give reasons for:

1. Plants manage to adapt to warm and dry climates.

.....

.....

.....

2. Birds migrate at different times of the year.

.....

.....

3. The variation in length and smoothness of the fur of cats of the same kind.

.....

4. Some plants have shallow, short roots.

.....

6 What happens if:

1. The poison dart frog doesn't have big eyes?

.....

2. Light is absent for plant growth?

.....

3. The Arctic fox does not have thick fur?

.....

.....

4. The plant is exposed to intense sunlight for a long time?

.....

5. A green plant is placed away from a source of sunlight (in terms of growth direction)?

.....

6. There are no healthcare services available in some places?

.....



**7 Answer the following questions:**

1. Mention the different environmental factors that help living organisms survive.

2. How do genetic factors affect the growth of living organisms?

3. How can the Dorcas gazelle camouflage in the desert?

4. Identify some traits of a living organism that are determined by genetic factors.

5. Explain the reasons for bird migration.

6. Explain: It was found that the children have the same eye color as the father.

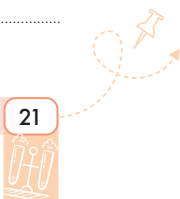
7. Identify the type of factor (genetic – environmental – lifestyle):

a. Smoking practice

b. Availability of hospitals

c. Length of the fingers

8. Why do some plants have long roots?





8 Compare between the Sphinx cat and the Birman cat, in terms of: the hair and kind.

P.O.C	Sphinx Cat	Birman Cat
a. Hair
b. Kind



1 Choose the correct answer:

1. All of the following are components of soil, except

a. water	b. air
c. glass	d. organic matter
2. One of the characteristics of sandy soil is that

a. its grains are small	b. its grains are large
c. its color is gray	d. it retains water
3. The building unit(s) of the rocks that make up the soil is/are

a. light	b. air
c. organic materials	d. minerals
4. The two main factors in soil formation are

a. weathering and erosion	b. the Sun and the moon
c. water and air	d. earthquakes and volcanoes
5. The is the thin, fragmented Earth's crust, which contains many organisms.

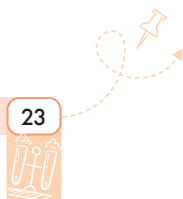
a. desertification	b. overcutting
c. soil	d. overgrazing
6. When a quantity of water was poured on various types of soil, it was found that the amount of leaking water from the sandy soil is

a. fast	b. medium	c. slow	d. very slow
---------	-----------	---------	--------------
7. The soil filters water from impurities and pollutants.

a. sandy	b. silt	c. clay	d. rocky
----------	---------	---------	----------
8. Swamps are characterized by being

a. dry	b. wet
c. sandy and loose	d. extremely Hot
9. The downward movement of soil minerals due to rainfall causes

a. formation of a hard layer	b. loose soil
c. fertile soil	d. dry soil





- 10.** Soil in grasslands, such as savannas, are characterized by being
- a.** dry and loose
 - b.** hard
 - c.** wet
 - d.** rocky
- 11.** Grasses grow in a environment.
- a.** high-porosity
 - b.** low-porosity
 - c.** water-retaining
 - d.** highly humid
- 12.** The natural factors that increase soil fertility include
- a.** earthquakes
 - b.** diseases
 - c.** volcanoes
 - d.** desertification
- 13.** Which of the following is a method of soil conservation?
- a.** Pollution
 - b.** Removing plants
 - c.** Digging tunnels
 - d.** Increasing land slope
- 14.** The factors that lead to the destruction of natural habitat due to human activity include
- a.** floods
 - b.** volcanoes
 - c.** fires of forests
 - d.** forests cutting
- 15.** When plants and animals are unable to adapt, they may face the danger of
- a.** increasing their numbers
 - b.** doubling their numbers
 - c.** extinction
 - d.** all the previous
- 16.** Soil can become healthy by using
- a.** pesticides
 - b.** chemical fertilizers
 - c.** natural fertilizers
 - d.** burnt organic materials
- 17.** Which of the following does not cause soil desertification?
- a.** Drought
 - b.** Forest overcutting
 - c.** Regular irrigation
 - d.** Overgrazing
- 18.** All of the following are factors that lead to soil degradation, except
- a.** overgrazing
 - b.** chemical fertilizers
 - c.** removing forests
 - d.** decomposers





2 Put (✓) or (x):

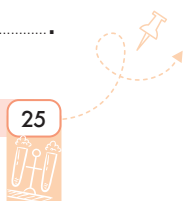
1. Humus increases soil fertility. ()
2. Water is one of the essential components of soil. ()
3. Soil is composed of a mixture of organic materials only. ()
4. The large particles in the soil make it more water-retentive. ()
5. One of the characteristics of sandy soil is the large size of its particles and its low water retention. ()
6. The climate does not affect the properties of the soil. ()
7. Removing vegetation protects the soil from erosion. ()
8. The entrance of invasive species positively affects the natural habitat. ()
9. The natural habitat is a place where living organisms live and their needs are available. ()

3 Correct the underlined words:

1. Large trees grow in highly porous soil. (.....)
2. Frogs are considered the most common animals living in desert soil. (.....)
3. The tomato crop benefits whenever the irrigation is varied. (.....)
4. One of the natural factors that increase soil fertility is earthquakes. (.....)
5. Removing vegetation cover preserves the soil from erosion. (.....)
6. Floods are one of the factors that lead to the destruction of natural habitats due to human activity. (.....)
7. Hurricanes cause the destruction of the natural habitat due to human activity. (.....)
8. Soil is formed from a single distinct layer. (.....)
9. The percentage of deserts in the world is decreasing. (.....)

4 Complete the following sentences:

1. Among the components of the abiotic soil are,, and





2. The particles of clay soil are in size.
3. The process of transforming rocks from one place to another is known as
.....
4. The two main processes in soil formation are and
5. The yellow soil grains are in size.
6. The is the remains of organisms that died and decomposed.
7. Plants that need a large amount of water grow in the soil.
8. The soil may be exposed to desertification due to and
.....
9. The poor agricultural practices lead to
10. A type of highly fertile soil is called
11. A type of soil with high porosity is called
12. A type of soil with low porosity is called
13. In the natural habitat,,, and are available as necessary resources for the survival of living organisms.
14. The properties of using sustainable soil include and
.....
15. One of the factors that increase erosion is
.....
16. Soil fertility can be restored by adding and
.....

5 Write the scientific term

1. They are the spaces between soil particles, which are filled with water or air. (.....)
2. It is the soil with medium-cohesion granules and a gray color. (.....)
3. They are organic components rich in nutrients that increase soil fertility. (.....)
4. They are environmental cleaners that decompose dead organisms, whether plants or animals. (.....)
5. It is the loose layer of the Earth's surface. (.....)



6. It is a type of soil which is characterized by large particles and low water retention. (.....)
7. They are ecosystems characterized by moist soil, where mosquitoes and frogs increase. (.....)
8. It is the practice of excessive grazing of animals on grasslands or pastures. (.....)
9. They are living organisms that live in their original habitat and have adapted to the environment. (.....)
10. It is a place where living organisms live in and where the necessary resources for their survival are available. (.....)
11. It is a place where living organisms live and where water, food, and shelters are available. (.....)
12. It is the depletion of one of the natural resources provided by the habitat or taken away entirely. (.....)
13. It is the process of transforming fertile lands into dry and unproductive lands. (.....)
14. It is a phenomenon that leads to soil degradation and turns it into a desert. (.....)
15. They are new types of living organisms that enter the natural habitat and negatively affect it. (.....)
16. They are types of living organisms that enter the ecosystem and cause a disturbance. (.....)

6 Give reasons for the following:

1. Decomposers are considered environmental cleaners.

.....

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2. Clay soil acts as a water filter.

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.....

.....



3. Potatoes can be planted in sandy soil.

.....

.....

4. Farmers use animal manure to restore the soil.

.....

5. Overpopulation growth may lead to the destruction of natural habitats.

.....

.....

6. Plants and animals depend on the soil.

.....

.....

7. Adding sand and silt help in soil restoration.

.....

7 What happens if:

1. The soil particles are large in size?

.....

2. Animal manure is added to the soil?

.....

3. The temperature rises, with respect to the soil?

.....

4. Heavy rain falls on the soil (in terms of the presence of minerals in the soil)?

.....

.....

5. Heavy rain falls on the soil (in terms of the amount of air in the soil)?

.....

6. Heavy rain falls down on the soil (in terms of nutrients)?

.....

7. Resources are decreased in an area, with respect to living organisms?

.....

.....

.....





8. Matters are burned at extremely high temperatures by using large amounts of coal?

.....

.....

8 Compare between:

Sand soil and clay soil, in terms of water retention and color.

P.O.C	Sand Soil	Clay Soil
a. Water Retention
b. Color

9 Answer the following questions:

1. Determine the importance of soil for plants, animals, and insects.

.....

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.....

2. Explain that decomposers work to maintain the balance of the ecosystem.

.....

.....

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3. Why does the type of soil vary from one environment to another?

.....

.....

4. Explain that the characteristics of the soil affect plants' growth.

.....

.....

.....





5. Why is speed considered an adaptation for animals in the savanna forests?

.....

.....

.....

6. Explain the effect of climate on wet soil (in terms of nutrients).

.....

.....

.....

7. Explain the effect of hot climate on clay soil (in terms of water permeability).

.....

.....

8. What can be done to slow down soil erosion?

.....

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.....

9. Mention the reasons for the destruction of natural habitats by humans.

.....

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1 Choose the correct answer:

1. Flamingos feed on
a. weed b. algae c. grass d. trees
2. causes liquid water to percolate down into the ground.
a. Heat energy b. Wind c. Gravity d. Friction
3. The transfers energy between water reservoirs on the Earth's surface.
a. heat energy b. wind c. gravity d. friction
4. The three main processes that make up the water cycle are
a. melting, condensation, and evaporation
b. melting, runoff, and condensation
c. evaporation, condensation, and precipitation
d. precipitation, runoff, and evaporation
5. Evaporation refers to the transformation of water from a state to a state.
a. liquid – solid b. solid – liquid c. liquid – gaseous d. solid – gaseous
6. Transpiration represents of the water vapor in the air.
a. 5% b. 10% c. 20% d. 40%
7. forms when many tiny water droplets accumulate together.
a. Rain b. A cloud c. Water vapor d. A fog
8. The water changes from a liquid to a gas by the process.
a. melting b. condensation c. evaporation d. freezing

2 Put (✓) or (x):

1. Flamingos immigrated to Salt Lake in Turkey, but it suddenly dried up. (✓)
2. Flamingos feed on algae in fresh water. (x)
3. Climate change affects the breeding of flamingos. (✓)
4. The drop of water level in lakes occurs as a result of evaporation. (✓)
5. Solar energy is distributed in equal amounts on the Earth's surface. (x)
6. Evaporation is the transformation of water from a liquid to a gas. (✓)
7. The runoff is the flow of water under the Earth's surface after precipitation. (x)

8. Oceans are the main source of evaporation in the water cycle. (X)
9. Climate change affects the water cycle. (✓)
10. The water cycle conserves the water percentage on Earth. (✓)
11. The volume of water in a puddle increases by increasing the runoff. (✓)
12. The evaporation process occurs by losing energy. (X)
13. Wind transfers energy between water reservoirs on the Earth's surface. (✓)
14. The cold air is replaced by the hot air. (X)
15. Transpiration from plants' leaves decreases in the morning. (X)
16. In the condensation process, water vapor gains energy. (X)
17. The water cycle is the movement of water between different reservoirs. (✓)
18. Evaporation occurs as a result of gaining heat energy. (✓)
19. Small lakes dry as a result of the runoff. (X)
20. Condensation occurs when a gas is heated and is turned into a liquid. (X)
21. The convection currents in the atmosphere help in determining regional climates. (✓)
22. Condensation process is turning hot water into water vapor. (X)
23. The wind is formed by cold air rising upward, then replaced by hot air. (X)
24. Earth's rotation is a reason for the wind direction determination. (✓)
25. Heat transfers from hot water to cold water. (✓)
26. The convection currents move horizontally. (X)
27. Warm, moist air is denser than cold one. (X)

3 Complete the following sentences:

1. The water level of a lake decreases as a result of evaporation.
2. The most important source of energy in the water cycle is the Sun.
3. The environmental challenges that face flamingos include drought.
4. Solar energy may distribute to hot regions and moderate regions.
5. The two basic factors for the water cycle are gravity and the Sun.
6. The water state changes in the water cycle by gaining and losing energy.
7. The processes in water reservoirs that require energy gain are melting and evaporation.



8. The processes that require the loss of energy from water in reservoirs are freezing and condensation.
9. The moist air contains a large amount of water vapor.
10. When a gas or a liquid is heated, its density decreases.
11. The warm air rises up.
12. The weather of the regions near the equator is more hot.
13. The Sun drives the cycle of the wind around Earth.
14. Water moves on Earth among water reservoirs.
15. The cold air goes down.
16. Tiny water droplets have condensed out of the air, forming clouds.
17. The convection currents move in a vertical direction.
18. When we put a blue jar with hot water on the top of a red jar with cold water, the colors don't mix.
19. Warm, moist air is less dense than cold, dry air.
20. Cold gases are more dense than warm gases
21. The dry air forms deserts.
22. The regions near the equator are very hot.

4 Write the scientific term:

1. It is the process that allows water to enter the atmosphere in the form of water vapor. **(Evaporation process)**
2. It is a process in which plants get rid of excess water in the form of water vapor through the pores. **(Transpiration process)**
3. It is the process that occurs when the water droplets forming the clouds become heavier and fall down by gravity. **(Precipitation process)**

5 Give reasons for:

1. Ice crystals and water droplets in clouds fall back again to the Earth.
Due to the force of gravity that pulls them down during the precipitation process.
2. Water percolates down into the ground.
Due to the force of gravity that pulls water to leak through the porous rocks, then to be collected in a groundwater reservoir.





3. Living organisms are considered a part of the water cycle on the Earth's surface.

Because nearly 10% of the water vapor in the air resulted from transpiration in plants.

4. Deserts get very little rain.

Due to the extreme hot and dry weather which causes more evaporation than precipitation.

5. Deserts are formed.

Due to the dry air that falls on many areas on the Earth.

6. The evaporation process occurs.

Because water gains thermal energy when the Sun heats up water.

7. The temperature differs around the world.

Due to the unequal distribution of solar energy on different areas on Earth.

8. The regions near the two poles are very cold.

Because the sun rays fall very inclined and distributed on a very large area.

9. The regions near the equator are very hot.

Because the sun rays fall perpendicular and concentrated on a small area.

6 What happens if:

1. Water gains high heat energy?

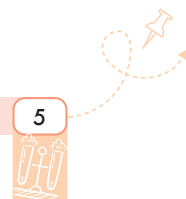
Water will evaporate and change from the liquid state (water) into the gaseous state (Water vapor).

2. The evaporation of water in a lake increases?

The water level in the lake will decrease (drop) and the lake may dry up.

3. A lake is subjected to a very hot temperature?

The water level in the lake will decrease (drop) and the lake may dry up.





4. The surface water is exposed to high temperature from the Sun?
The water will evaporate and the water vapor will rise up in the air.
5. Water runs off the land?
Water will be collected in different bodies of water on Earth.
6. You place a blue jar with hot water on the top of a red jar with cold water?
The two colors will not mix.
7. Very dry wind blows over an area of the land?
A group of deserts are formed on the Earth.
8. There is a difference of air particles temperature (relative to the movement of the air)?
 - **Convection current is formed.**
 - **Hot air (less dense) moves upward.**
 - **Cold air (more dense) moves downward.**

7 Answer the following questions:

1. Explain the role of the Sun in the water cycle in nature.
The Sun provides the energy needed to:
 - ① **Evaporate water into water vapor.**
 - ② **Melt ice into liquid water.**
 - ③ **Generate wind.**
2. Explain the role of gravity in the water cycle in nature.
 - ① **It pulls the water droplets and ice crystals in clouds down to fall back to the Earth's surface.**
 - ② **It pulls liquid water to flow downhill in streams and rivers toward larger bodies of water.**
 - ③ **It pulls glaciers from higher elevation to lower elevation.**
 - ④ **It pulls liquid water, causing its leakage into the ground, then to the groundwater reservoirs.**



3. How does the amount of solar energy affect the transpiration rate of plant leaves?

When the amount of solar energy increases, the rate of transpiration increases.

4. What is the relation between convection and condensation?

As warm, moist air rises by convection, it cools and condenses into water droplets, which collect together to form clouds.

5. Explain: Convection currents are important.

- **Convection currents help in the transfer of heat through the Earth's atmosphere.**
- **Convection currents play an important role in the occurrence of the condensation process.**

6. Explain: the role of the Sun in the wind movement.

The unequal distribution of solar radiation across Earth's surface generates wind. Warm air rises, and cool air from nearby areas flows in to replace it, creating wind.

1 Choose the correct answer:

- The is the amount of water vapor present in the air.
a. air density b. atmospheric pressure
c. humidity d. temperature
- A/An is used in determining the wind speed.
a. **anemometer** b. barometer c. radar d. thermometer
- The air particles density increases at the of the mountain.
a. top b. **bottom** c. middle d. height
- The is one of the tools designed to carry the measuring tools.
a. **weather balloons** b. barometer
c. rain gauge d. thermometer
- When heating equal amounts of sand and water, the water is heated the sand.
a. faster than b. **slower than**
c. similar to d. no correct answer
- When holding a paper spiral over a lit lamp, the paper spiral
a. burns b. doesn't spin
c. spins d. no correct answer
- The device is used to record the wind speed.
a. barometer b. thermometer
c. weather radar d. **anemometer**
- To determine the amount of rain falling, we use the
a. weather radar b. **rain gauge**
c. barometer d. weather balloon
- The is used in determining the air pressure.
a. anemometer b. rain gauge
c. barometer d. weather balloon

10. Warm air molecules move
a. backward b. downward c. forward **d. upward**
11. Sandstorms occur in regions.
a. polar b. coastal **c. desert** d. ice
12. All of the following are flood damages, except
a. moderate weather b. livestock drowning
c. damaging buildings **d. disrupting the economy**
13. The drought occurs due to the
a. moderate temperature **b. high temperature**
c. low temperature d. both a and c
14. The first step in weather forecasting and understanding climate change is the process.
a. data analysis **b. data collection**
c. connecting things d. maps usage
15. The affect the climate and weather.
a. mountains b. kinds of soil
c. reservoirs **d. all the previous**
16. We can describe that is very fast.
a. air density **b. wind**
c. humidity d. temperature
17. The weather condition in a short period of time is the
a. humidity b. climate **c. weather** d. clouds
18. The can give a report about air conditions.
a. fireman **b. meteorologist** c. astronaut d. pilot
19. helps in returning ice crystals back to the land.
a. The Sun **b. Gravity**
c. The moon d. Thermal convection
20. The is used in determining the temperature.
a. barometer **b. thermometer**
c. anemometer d. weather radar



21. Dust storms occur when very strong winds blow dust from areas experiencing extreme

a. humidity

b. drought

c. ice

d. fog

2 Put (✓) or (x):

1. Using solar panels in deserts is a way of developing farming methods. (✓)
2. A rain shadow occurs in the windward side. (x)
3. The atmospheric pressure decreases as we go higher. (✓)
4. Weather is an atmospheric condition during a long period of time. (x)
5. The atmospheric properties at the top of a mountain differ from those at the bottom. (✓)
6. Sand loses heat faster than water. (✓)
7. Cold air is denser than warm air. (✓)
8. Water reservoirs lose heat slowly. (✓)
9. In deserts, temperature during the day and the night are very high. (x)
10. The barometer is used to determine air pressure. (✓)
11. All places on the Earth's surface receive the same amount of sunlight, which causes the diversity of climate. (x)
12. The spinning of the paper spirals over a turned-off lamp indicates the occurrence of convection currents. (x)
13. Water loses its heat slower than sand. (✓)
14. The anemometer is used in determining the air pressure. (x)
15. Heavy rain causes the destruction of ecosystems. (✓)
16. Drought is the rise of water level above the riverbank. (x)
17. One of the negative effects of sandstorms is that dust fills the irrigation canals, affecting water quality. (✓)
18. One of the drought causes is the severe decrease in the temperature. (x)
19. Floods occur as a result of very dry sandstorms. (x)
20. Humidity percentage and wind speed are from weather elements. (✓)
21. The density of warm air increases because its molecules expand. (x)





3 Complete the following sentences:

1. When air is heated, it expands and becomes less dense.
2. The thermometer is used in measuring air temperature.
3. Devices that carry the measurement tools are weather balloons, airplanes, and satellites.
4. Using weather maps is the most effective way in analyzing the collected data.
5. Very tall mountains often have two sides, one is facing the wind and the other is away from the wind.
6. One characteristic of desert soil is its low fertility.
7. One of the difficulties that farmers face while farming in the deserts is the extreme hot and dry climate.
8. The air pressure at the top of the mountain is lower than the air pressure at the bottom of the mountain.
9. Meteorologists use weather radar to track thunderstorms and hurricanes.
10. The barometer device is used in determining the air pressure.
11. One of the negative effects of drought is that the water is not enough for farming and industry.
12. The reasons of flood occurrence are heavy rains or sudden melting of ice.
13. In the data analysis stage, we use weather maps to represent data and share information.
14. Sandstorms occur in the dry desert areas.
15. One of the causes of droughts is extreme hot weather.
16. One of the difficulties that faces farming in the deserts is the little amount of rainfall.
17. Rain may fall down in a form of water droplets, ice crystals, and sleet.
18. Warm air molecules rise up, while cold air molecules fall down as a result of convection currents.
19. Flooding occurs due to the sudden melting of ice.
20. Droughts occur due to an extreme increase in the temperature and lack of water.
21. Dust can build up on solar panels as a result of storms, causing power disruptions.





4 Write the scientific term:

1. It is the weight of the air above a location. (Air pressure)
2. It is the amount of force that air affects on the surrounding environment. (Air pressure)
3. It is the amount of water vapor present in the air. (Humidity)
4. It is the science of studying and predicting the weather. (Meteorology)
5. He is the scientist who uses different tools to study and predict weather. (Meteorologist)
6. It is a device that is used in measuring the volume and the speed of rain fall. (Weather radar)
7. It is the severe shortage of water available in an area. (Drought)
8. They are strong winds that carry sand and dust, blowing up from extremely dry areas. (Sandstorms)
9. He is a scientist who uses a variety of tools to study and predict the weather. (Meteorologist)
10. It occurs when the water level increases over the edge of a riverbank and flows onto the lands around the river. (Flood)
11. It is the weather condition in a long period of time. (Climate)
12. It is a phenomenon that occurs when wind blows over a mountain's chains. (Rain shadow)
13. It is a device used in tracking hurricanes and storms. (Weather radar)
14. It is the amount of water vapor existing in air. (Humidity)
15. It is a device used in determining air pressure. (Barometer)

5 Mention the importance of:

1. Weather balloons

They are used to carry measuring instruments high in the atmosphere to measure conditions of weather from different altitudes.

2. Weather radar

It detects the intensity and speed of precipitation and tracks thunderstorms and hurricanes.





6 Give reasons for:

1. Snowfall occurs in some places.

Because when the air in the clouds is cold enough, the water droplets in the clouds change into ice.

2. Weather forecasting is difficult and meteorologists may not be able to make accurate predictions.

Because some unexpected quick changes in weather conditions may occur.

3. The paper spirals spin over a turned-on lamp.

Because the air particles over the lamp are heated and become less dense, so they rise up, allowing the cooler and denser air particles to move downward, creating a convection current that spins the paper spiral.

4. The dangers of flooding increase if the land is frozen.

Because the frozen ground cannot absorb water.

5. Snow forms at the top of a mountain but it is still liquid at the bottom of the same mountain.

Because the temperature decreases as the height increases.

6. Plants grow slowly in the windless area of the mountain.

Due to the dry air and the little amount of rainfall.

7. Air pressure decreases at the top of mountains.

Because the weight of the air column decreases as the height increases.

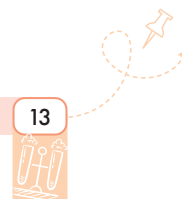
8. It is suitable to cultivate in the mountain on the side facing the wet air.

Due to the precipitation of rain at this wet side, which allows plants to grow.

7 Explain the scientific reason:

1. When hot air loses its heat, it descends.

Because it contracts as its molecules come close to each other, so it becomes denser and moves downward.





2. Snow forms on the top of the mountain while the water remains liquid at the bottom.

Because as the height from the Earth's surface increases, the air temperature decreases.

3. Meteorologists represent weather forecasts using probability ratios.

Because sometimes unexpected and quick changes in weather patterns can affect the weather in the next days or weeks.

8 What happens:

1. When we rise higher from the Earth in relation to the atmospheric pressure and temperature?

The atmospheric pressure and air temperature decrease.

2. When the air cools and water vapor condenses at the sky?

The water vapor changes into tiny water droplets that collect together, forming clouds.

3. The amount of water vapor in the air increases?

The humidity increases.

4. If a lit lamp is placed 5 cm away from a beaker containing sand and another beaker containing the same amount of water? (In terms of which one heats up faster)

Sand will heat up faster than water.

5. When you place a paper spiral over a turned-off lamp?

The paper spiral will not spin.

6. To sand and water at night after they are exposed to sunlight at the day?

Sand cools off faster than water.

7. To sand and water at the day after they are exposed to sunlight?

Sand heats up and cools up faster than water .

8. If the ice melts suddenly?

Floods occur.

9. If the weather is dry for a long time?

Droughts occur.



10. If dust accumulates (builds up) over solar panels?

The solar panels stop generating electricity.

9 Mention the main stages of studying and forecasting weather.

- ① Collecting data
- ② Analyzing data
- ③ Putting it all together

10 Answer the following questions:

1. What are the main stages (processes) of the water cycle in nature?

1- Evaporation 2- Condensation 3- Precipitation

2. Mention the three main stages that meteorologists follow to study weather forecast.

- 1- Collecting data**
- 2- Analyzing data**
- 3- Putting it all together**

3. What is the result of the severe decrease in temperature in some places?
(In terms of precipitation)

The water droplets in the clouds will change into ice crystals and fall in the form of snow.

4. Explain methods that farmers created to overcome desert soil.

- 1. They improve soil quality.**
- 2. They irrigate crops by reusing water.**
- 3. They grow crops that are able to withstand the heat and low-fertility soil.**
- 4. They use solar energy or wind turbines to power farms.**

5. A farmer noticed heavy rainfall on his farm and he wanted to determine the amount of rain in this area. What device is used for that? **Rain gauge**

6. What is the reason for the occurrence of sandstorms?

Sandstorms occur when very strong wind blows up sand or dust from a dry area, such as a desert.



7. Mention the negative effects of sandstorms.

1. Dust reduces visibility for drivers and motorists, which increases accidents.
2. Dust harms the human eye and the human respiratory system.
3. Dust can fill irrigation canals and decrease water quality.
4. Dust damages airplanes engines.

8. Mention the negative effects of flooding.

- 1- Damage of buildings by moving or breaking them
- 2- Drowning of people and animals

9. Mention the effects of drought.

Shortage of water for people, animals, and plants



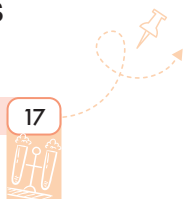
Pony Revision on Concept 4.1

Adapting to Survive

Weeks
9 - 10

1 Choose the correct answer:

1. Which of the following is not considered from the abiotic factors?
a. Light **b.** Water **c.** Temperature **d. Plants**
2. The behavioral adaptations include
a. thick skin **b.** fur
c. long ears **d. bird migration**
3. Which of the following does not help plants survive in desert environments?
a. Their thorns **b.** Their thick roots
c. Excessive transpiration **d.** Their small leaves
4. The adaptation of living organisms with the environment leads to
a. their extinction **b. their survival**
c. their population decrease **d.** their migration
5. The help(s) the cell to build genetic information between generations.
a. nucleus **b.** mitochondria **c.** chloroplasts **d.** vacuoles
6. The traits control the shape of the cat's pointed ear.
a. environmental **b.** abiotic **c. genetic** **d.** living
7. Some plants, such as, bear fruits when the daytime is shorter than the nighttime.
a. chrysanthemum **b.** cactus
c. herbaceous plants **d.** flowering plants
8. The Birman cat belongs to the
a. wild cats **b. domestic cats**
c. Pharaoh cats **d.** desert cats
9. All of the following are behavioral adaptations, except
a. migration **b.** living in burrows
c. the thorns on plants' leaves **d.** photosynthesis in plants





10. All of the following are structural adaptations, except the
- | | |
|---------------------------------|--|
| a. size of the plants' leaves | b. <u>direction of plants' growth</u> |
| c. thorns on the plants' leaves | d. stem length |
11. All of the following are lifestyles, except
- | | |
|------------|--------------------------------------|
| a. smoking | b. <u>healthcare services</u> |
| c. diet | d. exercise |

2 Put (✓) or (x):

1. The color of the fur is considered a structural adaptation. (✓)
2. The size of an organism's natural habitat does not affect its growth. (x)
3. The size of a living organism is one of the traits that is not affected by the genetic factors. (x)
4. The body of the emperor penguin is covered with a thin layer of skin to overcome the low temperature. (x)
5. The unhealthy environment positively affects human life. (x)
6. Height and skin color are considered abiotic factors that affect human life. (x)
7. Following a diet is one of the life choices that influence human growth. (✓)
8. Light is considered a hereditary factor influencing the life of plants and animals. (x)
9. The Sphinx cat is characterized by its abundant fur. (x)

3 Complete the following sentences:

1. Air is considered one of the **environmental** factors.
2. Palm trees adapt to the **shortage** of water in the desert.
3. Fish migration is considered one of the **behavioral** adaptations.
4. From the environmental factors affecting living organisms are **air** and **water**.
5. The **structural** adaptation of the organism is related to its body structure.
6. The thorns on the stems of some plants are considered **structural** adaptations.
7. The leaves of plants in the Western Desert are **small**.
8. **Climate** is one of the reasons for birds returning to their habitat.
9. The **chrysanthemum** plant grows when the daytime is shorter than the nighttime.



10. Light is considered one of the abiotic factors.
11. The factors that influence the formation of the human internally and externally are lifestyle choices, environmental factors, and genetic factors.
12. The Sphinx cat and the Birman cat belong to the Felis catus cats.
13. The nucleus of the cell carries the genetic genes.
14. The survival of living organisms despite difficult conditions is related to the genetic factors.

4 Write the scientific term:

1. It is the seasonal migration of animals from one place to another and is considered a behavioral adaptation. **(Migration)**
2. It is a process in which a living organism is able to live in a way that enables it to survive. **(Adaptation)**
3. They are factors that determine the structure and characteristics of a living organism and are passed from parents to offspring. **(Genetic factors)**
4. They are the living organisms in the ecosystem, such as plants and animals. **(Biotic factors)**
5. It is a behavior or an act performed by a living organism to survive. **(Behavioral adaptation)**
6. It is an environmental factor that affects plant growth and food formation. **(Light)**
7. They are plants that give fruits when the days are longer than the nights. **(Flowering plants)**
8. They have the information that is transmitted from the cell nucleus to the next generations. **(Genes)**
9. They have the information and traits that determine the characteristics of a living organism and are passed from parents to offspring. **(Genes)**
10. It is a plant that grows faster when the daytime is shorter than the nighttime. **(Chrysanthemum plant)**
11. It is an organelle in the cell that is responsible for reproduction and the construction of cell-specific information. **(Nucleus)**



5 Give reasons for:

1. Plants manage to adapt to warm and dry climates.

Because they have structural adaptations that help them adapt in the warm and dry weather, such as their thick stems and leaves to store water.

2. Birds migrate at different times of the year.

To search for the best conditions that help them reproduce and to find suitable new habitats.

3. The variation in length and smoothness of the fur of cats of the same kind.

Due to the genetic factors that pass from parents to offspring.

4. Some plants have shallow, short roots.

To absorb any available tiny droplets of water.

6 What happens if:

1. The poison dart frog doesn't have big eyes?

It will be difficult for it to avoid predators or to locate preys.

2. Light is absent for plant growth?

Plants cannot make the photosynthesis process and will die.

3. The Arctic fox does not have thick fur?

It cannot keep its body warm at low temperatures and cannot adapt and survive.

4. The plant is exposed to intense sunlight for a long time?

The parts of the plant will damage or dry and burn.

5. A green plant is placed away from a source of sunlight (in terms of growth direction)?

It will tend to grow toward the source of light.

6. There are no healthcare services available in some places?

The human health and growth will be negatively affected.





7 Answer the following questions:

1. Mention the different environmental factors that help living organisms survive.

The environmental factors that help living organisms survive are sunlight, air, water, food, and soil.

2. How do genetic factors affect the growth of living organisms?

Genetic factors determine the inherited traits that are transmitted from parents to offspring, such as length of the plant, color of the animal fur, and body size.

3. How can the Dorcas gazelle camouflage in the desert?

By using its fur color to hide from predators.

4. Identify some traits of a living organism that are determined by genetic factors.

1- The length of plants

2- The eye color of humans

3- The fur color of animals

5. Explain the reasons for bird migration.

- Birds migrate to search for:

1- The best conditions that help them reproduce.

2- Different food resources.

3- A suitable new habitat.

6. Explain: It was found that the children have the same eye color as the father.

Because they get the same gene of eye color from their father.

7. Identify the type of factor (genetic – environmental – lifestyle):

a. Smoking practice

(Lifestyle choice)

b. Availability of hospitals

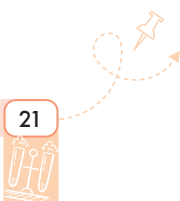
(Environmental factor)

c. Length of the fingers

(Genetic factors)

8. Why do some plants have long roots?

To reach the deep groundwater and absorb it.





8 Compare between the Sphinx cat and the Birman cat, in terms of: the hair and kind.

P.O.C	Sphinx Cat	Birman Cat
a. Hair	It doesn't have any hair or may have fine hair.	It has long, silky hair with different colors.
b. Kind	Felis catus	Felis catus



- 24



2 Put (✓) or (x):

1. Humus increases soil fertility. (✓)
2. Water is one of the essential components of soil. (✓)
3. Soil is composed of a mixture of organic materials only. (x)
4. The large particles in the soil make it more water-retentive. (x)
5. One of the characteristics of sandy soil is the large size of its particles and its low water retention. (✓)
6. The climate does not affect the properties of the soil. (x)
7. Removing vegetation protects the soil from erosion. (x)
8. The entrance of invasive species positively affects the natural habitat. (x)
9. The natural habitat is a place where living organisms live and their needs are available. (x)

3 Correct the underlined words:

1. Large trees grow in highly porous soil. (Grasses)
2. Frogs are considered the most common animals living in desert soil. (clay soil/bogs)
3. The tomato crop benefits whenever the irrigation is varied. (regular/moderate)
4. One of the natural factors that increase soil fertility is earthquakes. (volcanic eruptions)
5. Removing vegetation cover preserves the soil from erosion. (Digging canals)
6. Floods are one of the factors that lead to the destruction of natural habitats due to human activity. (Deforestation)
7. Hurricanes cause the destruction of the natural habitat due to human activity. (natural changes)
8. Soil is formed from a single distinct layer. (loose)
9. The percentage of deserts in the world is decreasing. (increasing)

4 Complete the following sentences:

1. Among the components of the abiotic soil are air, water, and minerals.





2. The particles of clay soil are small in size.
3. The process of transforming rocks from one place to another is known as erosion.
4. The two main processes in soil formation are weathering and erosion.
5. The yellow soil grains are large in size.
6. The humus is the remains of organisms that died and decomposed.
7. Plants that need a large amount of water grow in the clay soil.
8. The soil may be exposed to desertification due to deforestation and drought.
9. The poor agricultural practices lead to soil depletion.
10. A type of highly fertile soil is called silt soil.
11. A type of soil with high porosity is called sand soil.
12. A type of soil with low porosity is called clay soil.
13. In the natural habitat, water, food, and shelter are available as necessary resources for the survival of living organisms.
14. The properties of using sustainable soil include saving energy and reducing pollution.
15. One of the factors that increase erosion is increasing the amount of water.
16. Soil fertility can be restored by adding crop remains and animal manure.

5 Write the scientific term

1. They are the spaces between soil particles, which are filled with water or air. (Pore spaces)
2. It is the soil with medium-cohesion granules and a gray color. (Silt Soil)
3. They are organic components rich in nutrients that increase soil fertility. (Humus)
4. They are environmental cleaners that decompose dead organisms, whether plants or animals. (Decomposers)
5. It is the loose layer of the Earth's surface. (Soil)
6. It is a type of soil which is characterized by large particles and low water retention. (Sandy soil)



7. They are ecosystems characterized by moist soil, where mosquitoes and frogs increase. (**Bogs**)
8. It is the practice of excessive grazing of animals on grasslands or pastures. (**Overgrazing**)
9. They are living organisms that live in their original habitat and have adapted to the environment. (**Native species**)
10. It is a place where living organisms live in and where the necessary resources for their survival are available. (**Habitat**)
11. It is a place where living organisms live and where water, food, and shelters are available. (**Habitat**)
12. It is the depletion of one of the natural resources provided by the habitat or taken away entirely. (**Habitat destruction**)
13. It is the process of transforming fertile lands into dry and unproductive lands. (**Desertification**)
14. It is a phenomenon that leads to soil degradation and turns it into a desert. (**Desertification**)
15. They are new types of living organisms that enter the natural habitat and negatively affect it. (**Invasive species**)
16. They are types of living organisms that enter the ecosystem and cause a disturbance. (**Invasive species**)

6 Give reasons for the following:

1. Decomposers are considered environmental cleaners.
 - **Because they recycle chemical nutrients such as carbon, nitrogen, and oxygen to the air, water, and soil.**
 - **Because they decompose the organic materials in dead bodies into humus, which increases soil fertility.**
2. Clay soil acts as a water filter.
Because it has a small amount of pore spaces between its particles.
3. Potatoes can be planted in sandy soil.
Because sandy soil is loose, so it allows potato tubers to grow easily.



4. Farmers use animal manure to restore the soil.

To increase soil fertility and make the soil healthier.

5. Overpopulation growth may lead to the destruction of natural habitats.

Because overpopulation leads to decreasing food and water resources, which leads to habitat destruction.

6. Plants and animals depend on the soil.

Because soil provides plants with water, nutrients, and air, while it provides animals with food.

7. Adding sand and silt help in soil restoration.

Because adding sand and silt reduces the soil erosion.

7 What happens if:

1. The soil particles are large in size?

Draining of water becomes fast and it retains a small amount of water.

2. Animal manure is added to the soil?

The soil fertility increases, and the soil becomes healthy.

3. The temperature rises, with respect to the soil?

Soil will dry, and will lose its nutrients.

4. Heavy rain falls on the soil (in terms of the presence of minerals in the soil)?

Minerals may fall below the soil layer to form a hard layer that plant roots can't penetrate.

5. Heavy rain falls on the soil (in terms of the amount of air in the soil)?

Formation of waterlogged soil, which has a little amount of air.

6. Heavy rain falls down on the soil (in terms of nutrients)?

Nutrients may be washed away from the soil.

7. Resources are decreased in an area, with respect to living organisms?

The number of living organisms decreases due to the shortage of natural resources.



8. Matters are burned at extremely high temperatures by using large amounts of coal?

The percentage of carbon dioxide increases, causing an increase in the Earth's temperature.

8 Compare between:

Sand soil and clay soil, in terms of water retention and color.

P.O.C	Sand Soil	Clay Soil
a. Water Retention	Low It retains a small amount of water.	High It retains a large amount of water.
b. Color	Yellow	Dark (Black)

9 Answer the following questions:

- Determine the importance of soil for plants, animals, and insects.
 - **Soil is important for plants because it provides them with water, air, and nutrients.**
 - **Soil is important for animals as it provides them with food.**
 - **Soil is important for insects, such as worms and bacteria, because it provides them with a shelter (home).**
- Explain that decomposers work to maintain the balance of the ecosystem.
 - **Because they recycle chemical nutrients such as carbon, nitrogen, and oxygen to the air, water, and soil.**
 - **Because they decompose the organic materials in dead bodies into humus, which increases soil fertility.**
- Why does the type of soil vary from one environment to another?
Due to the difference in soil components and the climates of different areas.
- Explain that the characteristics of the soil affect plants' growth.
Some characteristic of the soil affect plants' growth, such as soil fertility, the size of particles, and the amount of organic matters.



5. Why is speed considered an adaptation for animals in the savanna forests?

- **Speed is important for predators to hunt their prey.**
- **Speed is important for the prey to escape from predators.**

6. Explain the effect of climate on wet soil (in terms of nutrients).

Heavy rainfall washes nutrients away from the topsoil, reducing the soil fertility.

7. Explain the effect of hot climate on clay soil (in terms of water permeability).

The clay soil becomes dry due to drought conditions, which will form a layer that doesn't allow much water to flow.

8. What can be done to slow down soil erosion?

Soil erosion can be slowed down by:

- 1- **Increasing planted areas.**
2. **Digging canals to collect excess water in soil.**
3. **Adding sand and silt to the soil.**

9. Mention the reasons for the destruction of natural habitats by humans.

Habitat destruction may be caused by humans through building houses, factories, and infrastructure that increases air pollution and causes deforestation and climate change.



حمل الآن

مجاناً وحصرياً

المراجعة رقم (3)

الترم الثاني



Concept

3.1

Water

Lesson 1

- ❖ Water exists in **three states** in nature: solid (ice), liquid (water) and gas (water vapor).
- ❖ Water **changes** from one state to another when it **gains or loses energy**.
- ❖ The Sun is considered the most important source that drives the water cycle.
- ❖ Sunlight provides the energy needed to:
 - Melting ice and changing it into liquid water.
 - Evaporating liquid water to form water vapor.
 - Generating the wind movement, where winds cause ocean currents that transport water to different locations on Earth.
- ❖ **There was a large Salt Lake in Turkey**, dries up(become a small puddle) completely in summer:
 - This lake hosts huge numbers of **flamingos** that migrate and reproduce (breed) there when the weather is warm.
 - **Flamingos** feed on algae that found in the shallow water of this lake.

Water cycle stages

1	Evaporation	The sun heats water in oceans, rivers, and lakes turns into water vapor Due to gaining thermal energy (process change from liquid to gas state)
2	Condensation	Water vapor rises, cools, and forms clouds. Due to loss thermal energy (process change from gas to liquid state)
Evaporation and condensation are two opposite processes		
3	Precipitation	Water falls back to the Earth as rain, sleet, snow, or hail.(snow pellets)
4	Runoff	Water flows along earths surface into rivers, seas and oceans or absorbed into the ground to replace underground water.
5	Collection	Rainwater falling on earths surface is collected in different water bodies such as oceans, seas and rivers .



Distribution of solar

- ❖ The amount of the solar energy that reaches Earth differs from one place to another on Earth's surface.

Hottest regions

They are regions in which the evaporation process is the greatest.

Moderate regions

They are regions in which the evaporation process is moderate.

Cooler regions

They are regions in which the evaporation process is the smallest.

Water cycle

It is the continuous movement of water among different

water reservoirs.

Lesson 2

Water reservoirs

They are storage locations of water on Earth.

- ❖ **Examples:** Oceans – Seas – Lakes – Rivers – Glaciers – Soil – Rocks- Living organisms - Atmosphere

Factors affect water cycle

- 1- **The Sun** is the most important **source of energy** that affects the water cycle.
- 2- **The main force** that affects the water cycle, which is **gravity force, and** (wind energy)

- ❖ Condensation and freezing occur when water particles lose thermal energy.
- ❖ Melting, evaporation and transpiration occur when water particles gain thermal energy.

- ✚ **Transpiration:** It is a type of evaporation that takes place through the stomata on the plant's leaves (About 10% of water vapor in the air comes from transpiration of plants)

► How clouds are formed?

- ✚ Clouds are formed due to condensation of water vapor into water droplets that attach to particles of dust, smoke, when very large numbers of these water droplets join together, they form clouds.
- ✚ Clouds are made up of millions of tiny water droplets, when these water droplets become too heavy, they fall in the form of rain.



Importance of water

- Humans, animals and plants need fresh water to survive.
- The water we need to live on Earth can be found in rivers, some lakes
- Most of plants depend on rain that falls from the clouds in the sky to grow.

ways of heat transfer

Convection: It is the process of heat transfer in liquids and gases, where Hot molecules (less dense) rise upward while Cold molecules (more dense) fall downward

❖ The heat of the Sun transfers from space to Earth's atmosphere by **radiation**.

Convection current : It is the rising of warm, less dense fluid and the sinking of cold, denser fluid.

- ❖ help in determining the regional climate.
- ❖ affect the movement of water through the water cycle.
- ❖ The unequal heating of land and oceans causes difference in temperatures and densities.
- ❖ rotation of convection currents causing the formation of wind and ocean currents.

Heating of earth**Near the Equator**

- ❖ Weather: Hot and humid.
- ❖ Reason: Sun rays fall perpendicular on the Earth's surface, concentrating heat in a small area

Moving Away from the Equator

The weather depends on the temperature and precipitation:

- ❖ It could be warm and humid, Or it could be freezing cold, depending on the region.

Inclination of Sun Rays**Semi-Inclined Rays (North and South of the Equator)**

- ❖ Weather: Warm.
- ❖ Sun rays spread over a larger area, reducing the heat effect.



Very Inclined Rays (Far from the Equator)

- ❖ Weather: Very cold.
- ❖ Sun rays spread over a larger area, reducing the heat effect.

The inclination of the sun's rays determines the distribution of heat:

Summary

- ❖ Perpendicular rays = concentrated heat = hot weather.
- ❖ Semi-inclined rays = spread heat = warm weather.
- ❖ Very inclined rays = highly spread heat = cold weather.

Earth's Wind and Its Effects**Lesson 4****Global Wind System**

- ❖ Winds blow in constant directions over long periods.
- ❖ Wind determines **weather and climate**
- ❖ Changes in wind cause changes in weather and climate.

Factors Determining Wind Direction

- ❖ Amount of solar radiation.
- ❖ Earth's rotation.

If No Wind

- ❖ The equator would be extremely hot, and the poles would freeze.
- ❖ Ecosystems would change or disappear.

How Wind Forms

- ❖ Warm air rises due to Sun's radiation and is replaced by cooler air.
- ❖ Rising warm air condenses, causing rain and forming dry air: which creates deserts.
- ❖ Air flows back, completing the cycle.

Sun's Energy

Unequal heating of Earth creates convection currents:

- ❖ Warm air moves from the equator to the poles.
- ❖ Cold air moves from the poles to the equator.



Concept

3.2

Weather Changes and Desert Farming

Lesson 1

The Causes of Weather Changes

- ❖ Cold, dry air is denser than hot, humid air.
- ❖ Hot air rises when it meets cold air.
- ❖ As hot air rises, it cools and condenses, forming rain.

Farming in the Desert

- ❖ Desert farming is difficult :
due to 1-it receive about 250 millimeters of rain per year and this is least amount of rain compared to all other biomes.
2- extreme hot and dry weather
- ❖ Farmers improve desert soil through:
 1. Soil: improve the soil quality.
 2. Water: Using new irrigation techniques (ex: reusing water).
 3. Crops: Planting crops that able to grow in the hot climate and low-fertility soil
 4. Energy: : They use wind and the Sun to power their farms in desert with wind turbines or solar energy.

Mountain Effects-Rain Shadow Phenomenon

Wet Side" ward wind" (Facing the Coast):

- ❖ Warm, humid air rises and cools.
- ❖ Water vapor in cold air Condenses occurs precipitation .

Dry Side" leeward wind "(Away from the Coast):

- ❖ dry air descends and become Warm so it drying the land

Changes in Atmospheric on Mountains

Properties	Bottom of the Mountain	Top of the Mountain
Atmospheric Pressure	High	Low
Air Temperature	High	Low
Air Density	High	Low

Meteorology and Predicting the Weather

Lesson 2

Meteorology

The science of studying and predicting the weather.

Meteorologist

A scientist who uses tools to collect and analyze weather data.

Meteorologists can predict the weather using the following steps:

1. Collecting data.
2. Analyzing the data.
3. Putting it all together.

1. Collecting data.

Tool	Function
Thermometer	Measures temperature
Barometer	Measures atmospheric pressure
Satellites, airplanes and Weather Balloon	Carry measuring instruments high into the atmosphere to measure conditions of weather from different altitudes.

Atmospheric pressure

- ❖ It is the amount of force that air exerts on its surroundings
- ❖ (or) It is the weight of the air above a certain area.

Humidity

the measure of how much water vapor is present in the air.

2. Analyzing the Data

- ❖ use weather maps to collect data from different places and over short periods of time, so that they can analyze these data.
- ❖ Help predict air movement and weather patterns.
- ❖ Mapping data(mapping measurements) means representing data on a map.

3. putting it all together

1. Collecting and analyzing data about the atmosphere
2. observe some other factors that affect the atmosphere such as landforms.
3. Using computer models to predict how these different factors will interact.

NOTES

- ❖ Weather predictions may be uncertain due to unexpected changes in air temperature, moisture, or wind.
- ❖ Land (Sand) heats up and cools down faster than water.
- ❖ This temperature difference affects air movement.



Air Movement and Wind

How Air Moves

- ❖ Hot (Warm) Air: When air is heated, it expands as its molecules spread out away from each other so, becomes less dense and moves up.
- ❖ Cool Air: When air is cooled, it contracts as its molecules come close to each other so, becomes more dense and moves down.

Air Currents and Wind

Type of Air Movement	Direction
Air Current	Vertical movement of air (up and down)
Wind	Horizontal movement of air (left and right)

NOTES

The differences of air temperature of areas affect :

The speed of air current and wind, The direction of wind movement

Tools for Forecasting

Tool	Function
Anemometer	Measures wind speed
Rain Gauge	Measures the amount of rain
Weather Radar	Track thunder storms, hurricanes, and detects intensity - speed of precipitation

How Precipitation Occurs

1. Water vapor rises and condenses into droplets.
2. Droplets grow larger and fall due to gravity (rain, snow).

NOTES

- ❖ Snow forms when cold air changes water droplets into ice crystals.
Make snowfall



Extreme Weather - Droughts, Floods, and Sandstorms**1- Drought**

is a shortage of water for drinking, farming, animals and industry

- ❖ **Cause:** (dry weather for long period) → due to the extreme hot temperatures.
- ❖ **harms of Drought:** there is not enough water for people, plants, and animals

2- Flooding

It is the increase in the flow of water over the edges of riverbanks and onto the land around a river.

- ❖ **Cause:** 1- The increase in the rate of the rainfall, 2- The sudden melting of snow and ice
- ❖ **harms of Floods:**
 1. Damage to buildings and farms.
 2. Loss of life for people and animals.
 3. Harming of economy.

Flood is more dangerous if the land around the flood is frozen bec. it cannot absorb the water

- ❖ **Advantages of Floods:** Some ecosystems depend on periodic floods such as the ecosystems along the Nile River.

3- Sandstorms (Dust Storms)

- ❖ **Sandstorm:** occurs when very strong winds blow sand or dust from dry areas.
- ❖ they extend for several kilometers long and its height may reach hundreds of meters.
- ❖ **Harms of Sandstorms:**
 1. It reduces visibility, making driving dangerous.
 2. It accumulates on solar panels, reducing energy production.
 3. It fill up irrigation canals, so the water quality decrease .
 4. It damages plane engines.
 5. It harms the eyes and respiratory system.



**Concept
4.1****Adaptation and Its Types**

- ❖ Dorcas gazelle, which lives in desert and semi-desert of Egypt and the Middle East.
- ❖ This gazelle was able to adapt and survive in hard desert conditions through some adaptations such as :
 - Its body color that helps it hide in the desert.
 - It doesn't drink water for several months.
- ❖ Living organisms grow well when environmental resources like water and food are available. If resources are limited, they adapt in different ways to survive.

Inherited behaviors

Traits passed from parents due to genetic factors.

Acquired behaviors

Traits developed due to environmental factors

Adaptatio

the changes that help living organisms survive in their environments

It is divided into:

1- Structural (Physical) Adaptation:

It is the adaptation that is related to the body structure of a living organism to help it survive

Examples:

- ❖ Thorns on the stem of some plants.
- ❖ The thick fur which covers the body of some animals that live in cold climate.

2- Behavioral Adaptation:

It is a change in the behaviors or acts of a living organism to help it survive

Examples:

- ❖ Migration
- ❖ Plants grow toward sunlight for energy.
- ❖ Living animals in a herd

Migration

is a behavioral adaptation where birds move from one place to another seasonally



Reasons for Bird Migration

Birds migrate to:

1. Find better conditions for reproduction and preserve their species
2. Search for food.
3. Find suitable new habitats

Challenges for Migratory Birds

1. Extreme weather conditions.
2. shortage of food and water.
3. Predators.
4. limited resting sites due to habitat loss

Migratory Birds in Egypt

Egypt attracts millions of migratory birds due to: Moderate winter climate.

- ❖ The red sea and Nile river are from important stopovers for millions of migratory birds such as (falcons and eagles)
- ❖ The Red Sea region with diverse environments:
 1. Coastal environment.
 2. Marine environment.
 3. Mountain environment.

Environmental and genetic factors influence

1- Environmental Factors

- ❖ External factors affecting living organisms, such as:
 1. **Availability of Water and light:** important for plant growth and animals
 2. **Availability of water:** Affects animal growth.
 3. **Size of habitat:** Affect the number of organisms that can live in an area

2- Genetic Factors (Genes)

- ❖ Inherited traits are passed from parents to offspring, such as:
 1. The body size of animals.
 2. The length of plants
 3. The fur color of animals

NOTES

- ❖ Migratory birds return to the same place each year.
- ❖ Example: Steppe eagle.



Adaptation in Different Environments

Different animals have physical adaptations that help them survive in specific environments

Animal	Habitat	Adaptation
Emperor Penguin	Antarctic	Thick blubber(fatty layer) and dense feathers to keep body warm and protect from freezing
African Penguin	South Africa	Circle of skin around eyes to cool body.
Arctic Fox	Arctic environment	Thick white fur to keep body warm and hide
Poison Dart Frog	Tropical Rainforest	big eyes for see at night
Lizard	Desert	Sandy-colored scales to protect it

Structural Adaptation in Plants

Large parts of Egypt's western desert plants have adaptations to survive hard conditions:

1. **Size:** Usually small and herbal.
2. **Roots:** Short, spread near the surface to absorb water.
3. **Leaves:** Thick to store water.
4. **Stem:** Some have thick stems for water storage, others have thorns to keep away herbivories

Abiotic Factors and Adaptation

Ecosystem

It is an area that contains living organisms (biotic factors) and nonliving things (abiotic factors) that interact with each other.

Small ecosystem: A small land area with grasses and insects

Large ecosystem: Arctic with caribou feed on grass and wolves hunts caribou.

Factors in Ecosystem	Examples
Biotic Factors (living organisms)	Humans, animals, plants.
Abiotic Factors (nonliving things)	Sunlight, air, water, soil, temperature and precipitation

Effect of Abiotic Factors on Growth

- ❖ Light is important for plant growth.
- ❖ Too much intense light can damage plants and cause drying or burning.
- ❖ Some plants bear fruit when day are longer than night

Effect of Abiotic Factors on Adaptation

- ❖ Water and light the most important factor to organism's adaptation.



- ❖ Structural characteristics (physical traits) that transfer from parent to offspring to adapt to abiotic factor and survive

Limited resource in Desert

Hot Deserts:

- ❖ Plants have short roots to absorb surface water or long roots for groundwater.
- ❖ Small water pools form in rocks during rare rainfalls for short period.

Cold Deserts (Antarctica):

- ❖ Extremely cold temperatures all year.
- ❖ Winter temperatures below freezing, summer reaches 21°C.

NOTES

- ❖ Plant growth is affected by light intensity and duration of exposure.
- ❖ Some **flowering plants bear fruit in day are longer than night**
- ❖ But when **day are shorter than night the Chrysanthemum plant days grow.**

Inheritance of Traits

Lesson 3

How Traits Transfer from Parents to Offspring

- ❖ Transfer during reproduce and produce offspring of same kind
- ❖ Traits pass through genes in the nucleus of cells.
- ❖ Genes are tiny structures that found in the nucleus of cells of living organisms and control characteristics like:

Animals: Eye color, nose shape, fur color.

Plants: Height, flower color, leaf shape.

Example –types of Cats

1. Birman Cat: **Long, silky hair with different color** inherited from parents.
 2. Sphynx Cat: **No hair (very fine)** inherited from parents.
- ❖ Birman and sphynx cat belong to **domestic cat**

Example - Desert Plants

1. Inherited traits help plants survive extreme heat and little rainfall.
2. There are grasses ,shrubs ,trees and flowering plants
3. Each generation becomes stronger due to inherited traits from parent to offspring.



Factors Affecting Human Growth and Behavior devolvemement

1. Lifestyle Choices

- ❖ Bad Habits: Smoking, eating a diet full of chip and drinking soda.
- ❖ Good Habits: eating Healthy food, doing exercise.

2. Environmental Factors

Outside factor that impact health:

- ❖ Healthy environment (positively affect): Supports good growth.
- ❖ Unhealthy environment (negatively affect): Can cause diseases due to health care isn't available, water unsafe , no food and sanitation service not available

3. Genetic Factors

- ❖ Inherited traits determine physical features like tall, length your fingers , and earlobe hangs.
- ❖ Genes carry traits from parents to offspring.

Concept

4.2

Soil variety

Lesson 1

What is soil ?

1. is an important resource for humans, animals and plants to get some of their basic needs.
 2. It is the loose layer (delicate skin) which covers Earth's crust.
 3. If the **soil is unhealthy**, the **environment will change**, where this leads to death of plants that grow and also affects
 4. The environment affects the soil when air temperature increases in an environment, it will dry and lose its nutrients
 5. Soil has many types and colors
- Composition of soil differs from one place to another on Earth's surface **due to the effect of climate and types of rocks**
 - **Types of soil:** | Sand soil | | Silt soil | | Clay soil |
 - ❖ Differences and similarities between the different types of soil

Differences	Similarities
They have different colors and textures	All types of soil are formed in nature.
The size of soil particles may be large, medium or small.	All types of soil keep the life on Earth.



Components of soil

- 1- Organic materials (such as dead plants).
- 2- Sand, gravel and minerals which are formed due to breaking down of rocks through the weathering process.
- 3- Living organisms (such as worms and insects).
- 4- Water and Air.

❖ **weathering** and **erosion** are important role in the formation of soil.

Importance of soil

1. It is important for the plants that people and animals feed on to survive.
2. It provides the plant with its basic needs for growth as soil contains air, water, and nutrients.
3. It is home (shelter) to many different living organisms such as: Worms, insects, fungi, and bacteria.

Composition of soil

➤ **1- Inorganic materials:** are the nonliving components of soil.

- ❖ Water
- ❖ Air
- ❖ Rocks and minerals.
- ❖ **Minerals:** They are the building units (blocks) of rocks
- ❖ The role of rocks in the formation of soil: (weathering, erosion and deposition)

weathering	Erosion	Deposition
Due to the effect of water and wind, Rocks are broken down into small pieces such as particles of sand, silt and clay.	The small pieces of rocks move from one place to another.	These small pieces of rocks will deposits and mix with other ingredients forming different types of soil.

➤ **2- Organic materials:**

- ❖ Remains of dead plants and animals
- ❖ Decomposers (bacteria, fungi, earthworms)

Importance of Decomposers

- ❖ They break down dead plants and animals.
- ❖ They return nutrients to the soil, water, and air.



- ❖ They help recycle matter and support plant growth.
- ❖ Play a role in the emergence of Humus

Humus

It is an organic material that is rich in nutrients produced from decomposition of dead organisms. Increases soil fertility and helps plant growth

NOTES

- ❖ 50% of soil = minerals + organic materials
- ❖ 50% of soil = pore spaces (filled with water or air)

Pore Spaces (Pores)

Spaces between soil particles filled with air or water

- ❖ Hold moisture for plant use.
- ❖ Help plants get oxygen & absorb water.
- ❖ Let roots breathe.

NOTE

- ❖ Pore size affects how much water and air the soil can keep

Types of Soil and Comparison

Points	Sand Soil	Silt Soil	Clay Soil
Particle Size	Large	Medium	Small
Water Flow	Fast	Medium	Slow
Water retaining	Low	Medium	High
Color	Yellow	gray	dark

Lesson 2

- ❖ Sand allows water to flow fast → large pore spaces among it → retain (hold) small water
- ❖ Silt allows medium amount water to flow → medium pore spaces among it → retain medium water
- ❖ Clay allows water to flow slowly → small pore spaces among it → retain (hold) large water

Soil & climate

- ❖ **The climate affects the soil:** The climate in an area affects the characteristics of the soil in this area.

Humid Areas

Amount of water lead to:

- Wash down the nutrients of the soil.
- Minerals may fall below the soil layers this will **form a hard layer** that plant root can't penetrate.
- ❖ **Waterlogged soil:** contains very large amount of water and very little amount of air



Dry Areas

- ❖ Rich with clay particles, and becomes dry due to drought conditions that will form a layer that doesn't allow much water to flow.
- ❖ The dry clay layer in that soil makes it difficult for plants to grow in it.

NOTES

- ❖ Soil Affects Climate:
Plants in soil affect temperature and weather of ecosystem.

soil & Ecosystems

Ecosystem	Soil Type	Plants	Animals
Grasslands (Savanna)	Dry, sandy soil (drains quickly)	Grasses, small plants	Gazelles, lions, cheetahs
Bogs	Wet, clay soil (retains much water.)	That love grows in wet soil.	Frogs, mosquitoes

NOTES

- ❖ Savannas are grassland ecosystems that are common in central Africa.
- ❖ Speed in savanna animals is an adaptation for survival.
- ❖ frogs and mosquitoes in bogs is due to:
 - The moist conditions.
 - Very cool temperatures.

Soil Impact earth**Negative Practices****1-Soil Depletion**

2-Desertification: process by which the land becomes infertile and turns into deserts.

1. Soil Depletion: caused by:

- converting fertile agricultural lands (arable lands) into cities, factories, and pastures
- Overuse of pesticides
- Overusing of chemical fertilizers and other pollutants

2. Desertification:

- Land becomes desert because of:(Deforestation, Drought and Overgrazing)

NOTES

- ❖ Half of Earth's farming soil is lost in 150 years.
- ❖ 38% of Earth's land of Earth's land becomes very dry and exposed to desertification.
- ❖ Organic fertilizers: Improve plant quality and soil life.



Ways of soil restoration

Adding Nutrients	Crop Diversification
Crop remains (residues) like: straw and stems (stalks).	planting different types of crops and rotating them with crops that keep the soil fertility.
Natural fertilizers like: animals manure.	

➤ **Crop quality improves with:**

- ❖ Moderate Regular and moderate irrigation.
- ❖ Adding suitable amount of organic fertilizers

NOTES

Unsuitable environmental factors may lead to:

- 1- Producing weak plants.
- 2- Reducing the amount of crops.
- 3- Spreading of plant diseases among crops.

Soil Erosion

Factor Causes Erosion	Solution
Removing plants	Increase planted areas
Increase amount of water	Digging trenches to collect the excess water in the soil
Increase slope of land	Decreasing the inclination of the land
Type of soil	Adding sand and silt to the soil that help in decreasing the effects of moving water over the soil.

Climate & Habitat Destruction

➤ **What is Habitat?** A place where living organisms live in and it provides: Food, Water, Shelter, and Space.

❖ **Examples:** Deserts, Forests ,Streams ,Oceans and Grasslands

➤ **Habitat destruction:** its type (Natural changes and Human activities)

1-Natural changes:

- ❖ **Ex:** Hurricanes, floods, fires, Destructive earthquakes, Volcanic eruptions, disease of living organisms.
- ❖ But example of natural changes have some benefits:
 - 1-Volcanoes → make soil fertile.
 - 2- Forest Fires → release seeds from close fruits (sealed pod)
 - 3- Diseases of living organisms. → control number of population.



Human activities of Habitat Destruction

❖ People go to make many changes in their habitat to get their needs such as:

- 1- Building houses
- 2- Building factories to produce goods
- 3- Construction of infrastructure such as roads and railway tracks

❖ These human activities lead to changes such as:

- 1- Turning natural spaces such as hills, prairies and valleys into factories and homes.
- 2- Deforestation to do different industries.
- 3- Destroying lands for mining, making road and airport runways.
- 4- Environmental pollution and waste disposal to landfills

All lead to climate change and habitat loss

Overpopulation

means that too much increase in the number of a certain species of living organisms in a habitat.

➤ Natural changes cause Overpopulation:

❖ Disappear of predators, prey increase, unavailability of resources.

➤ Human activates cause Overpopulation:

❖ New species are brought by Humans into an area → become invasive species → kill off native plants and animals live in this area

❖ Example invasive species: Lionfish in Red Sea → killed 79% of young native fish

NOTES

❖ When organisms can't adapt or move to new environments, they may become extinct.

Reducing Pollution

No	Methods of reducing water pollution
1	Treatment of sewage and industrial water
2	Keeping green areas
3	Using suitable amounts of fertilizers
4	Getting rid of trash in correct ways
5	Using soil fences and sedimentation ponds
6	controlling air pollution that is produced from cars and industry

❖ Preventing water pollution is more effective than cleaning up pollution from water that requires a lot of time and effort.

Lesson 4



Harms of traditional bricks:**➤ Problems with traditional bricks:**

- ❖ scientists and engineers hope to stop depending on traditional bricks and concrete, **because** they consume
 - huge amounts of wood and coal → cause high pollution.
 - bricks that must be burned at more than 1000°C
 - ingredients of cement must be burned at 1450°C.
- ❖ manufacture of bricks and cement requires a lot of energy and produces a lot of pollution.

➤ Using soil to build sustainable homes:

- ❖ Use subsoil (not topsoil).
- ❖ Add chemicals material to the soil that → turn the clay of soil into substance that looks like glue
- ❖ The new substance is used to build **sustainable homes** instead of the **traditional bricks**

With my best wishes for you
Mrs/Menna Hussein

أنت أقوى مما تتخيل ..
أمن بقدراتك !



حمل الآن

مجاناً وحصرياً

المراجعة رقم (4)

الترم الثاني





Final Revision

Mr. Ahmed ElBasha

★ **(1) Write the scientific term:**

- 1) The force which causes moving down of water from higher places to lower places on Earth. (.....)
- 2) The loose layer that covers Earth's surface. (.....)
- 3) It is a change in the body structure of living organisms that helps them to survive. (.....)
- 4) Living organisms help in recycling nutrients from dead plants and animals back to the soil. (.....)
- 5) It is the step in which rainwater falling on Earth's surface is collected in different water bodies. (.....)
- 6) The scientist who studies Earth's atmosphere and forecasts the weather. (.....)
- 7) It is the step in which water flows along the Earth's surface into river and then into the ocean or sea. (.....)
- 8) An important stopover in Egypt for migratory birds, that includes marine, coastal and mountain environments. (.....)
- 9) It is a change in the behaviors or acts of a living organism to help it survive. (.....)
- 10) The process which breaks down rock into small particles. (.....)
- 11) They are responsible for determining the body features and present in the cell nucleus. (.....)
- 12) It is formed from millions of tiny water droplets which are condensed from water vapor in the sky. (.....)
- 13) It is a natural phenomenon that occurs when the level of water in a river increases until it overflows onto its banks. (.....)
- 14) It is the process which helps in formation of clouds in the sky. (.....)
- 15) A community of biotic and abiotic factors interact with each other. (.....)

- 16) The main source of energy that affects the water cycle. (.....)
-
- 17) They are the building unit of rocks. (.....)
-
- 18) An instrument used to measure the wind speed. (.....)
-
- 19) It is weight of the air above a certain area. (.....)
-
- 20) It is a side of mountain ranges at coastal regions that faces the coast. (.....)
-
- 21) It is a form of evaporation that takes place through the stomata, which are found in plant leaves (.....)
-
- 22) It is a device used to measure the atmospheric pressure. (.....)
-
- 23) It's the dark soil that can retain large amounts of water. (.....)
-
- 24) It is the method by which the heat of the Sun transfers from space to Earth. (.....)
-
- 25) They are the factors that include living organisms in an ecosystem. (.....)
-
- 26) They're the factors that include nonliving organisms in an ecosystem. (.....)
-
- 27) It is a type of soil that retains a medium amount of water and has medium pore spaces between its particles. (.....)
-
- 28) It is the science of studying and predicting the weather. (.....)
-
- 29) It is a change in the act of a living organism to help it survive. (.....)
-
- 30) It is a desert biome that has a cold temperature all year. (.....)
-
- 31) It's the process in which matter changes from a liquid state to a gaseous state. (.....)

★(2) Choose the right answer:

1. An area between buildings contains grasses, insects and weeds represents

- a. a large ecosystem.
b. a small ecosystem.
c. structural characteristics.
d. physical characteristics.

2. Wind is formed when rises and replaced by that flows from nearby areas.

- a. warm air - cold air
b. warm water - cold water
c. cold water - warm water
d. cold air - warm air

3. is from the invasive species that are found in the Red Sea.

- a. Emperor penguin b. Poison dart frog
c. Lionfish d. Lizard

4. In regions the rate of evaporation would be the smallest.

- a. moderate b. hottest c. coolest d. polar

5. The density of cold dry air is that of hot humid air.

- a. more than b. less than c. equal to d. similar to

6. All the following are from biotic factors in an ecosystem, except

- a. human. b. plants. c. animals. d. soil.

7. Dorcas gazelle lives in

- a. tropical area.
b. desert area.
c. north pole.
d. south pole.

8. Genes are tiny structures that found in

- a. cell nucleus.
c. cell wall.
- b. cell membrane.
d. mitochondria.

9. The increase in the amount of rain may cause

- a. flooding. b. drought. c. sandstorm. d. hurricane.

10. is from the invasive species that are found in the Red Sea.

- a. Emperor penguin b. Lizard c. Lionfish d. Dart frog

11. The soil provides the plant with all the following, except

- a. water. b. air. c. nutrients. d. sunlight.

12. Heat transfers from the object to the object.

- a. big - small b. small - big c. hot - cold d. cold - hot

13. The weather of the areas near the equator is

- a. hot and humid.
c. warm and humid.
- b. hot and snowy.
d. warm and snowy.

14. All the following are biotic factors, except

- a. insects. b. animals. c. air. d. grasses.

15. Transpiration process in green plants produces about of water vapor in air.

- a. 5% b. 10% c. 15% d. 20%

16. Soil provides the plants with all the following except

- a. water. b. nutrients. c. air. d. sunlight.

17. Poison dart frog lives in environment.

- a. tropical rainforest b. desert
c. arctic d. mountain

18. The evaporation of water from plant leaves is called

- a. condensation. b. transpiration. c. rainfall. d. freezing.

19. The amount of water vapor in the air is known as

- a. humidity. b. evaporation. c. condensation. d. a cloud.

20. Due to the very little rains which precipitate in some areas on Earth, large areas of are formed.

- a. forests b. seas. c. oceans. d. deserts.

21. All the following are inherited traits in human, except

- a. eye color. b. nose shape. c. fur color. d. ear shape.

22. All the following are considered as the main processes in transferring water through water reservoirs, except

- a. condensation. b. collection.
c. evaporation. d. precipitation.

23. At the top of the mountain, the atmospheric pressure is and the temperature is compared to the bottom of the mountain.

- a. lower - lower b. higher - higher
c. lower – higher d. higher – lower

24. Overpopulation leads to the decrease in all of the following, except

- a. food. b. water.
c. shelter. d. habitat destruction.

25. The soil provides the plant with all of the following except

- a. water. b. air. c. nutrients. d. sunlight.

26. Dorcas gazelle lives in

- a. tropical areas. b. desert areas. c. North pole. d. South pole.

27. A rain shadow is an area that is formed behind a

- a. tree. b. mountain. c. building. d. bridges.

28. Savannas are ecosystems.

- a. wet polar b. wet grassland
c. dry polar d. dry grassland

29. The change in climate leads to the of some living organisms.

- a. increase b. extinction c. reproduction d. pollution

30. The color of sand soil is

- a. yellow b. green c. white d. black

31. The barometer is used to measure

- a. air temperature b. atmospheric pressure
c. mass d. length

32. When a liquid is heated, it and becomes less dense and

- a. expands - heavier b. contracts - lighter
c. expands - lighter d. contracts - heavier

33. The form of energy that flows from a hot object to a cold object is called energy.

- a. sound b. thermal c. magnetic d. potential

34. The soil provides the plant with all the following, except

- a. water b. air c. nutrients d. sunlight

35. The material rich in nutrients and produced from the decomposition of dead organisms is

- a. decomposer b. humus c. water d. sand

36. Birman cats have

- a. very fine hair b. long and silky hair
c. no hair d. black feathers

37. The water vapor present in air changes into when it hits a cold water bottle.

- a. a gaseous state b. liquid water c. steam d. juice

38. The increase in the amount of rain may cause

- a. flooding b. drought c. sandstorm d. dust storm

39. A rain shadow is an area that is formed behind

- a. trees b. buildings c. mountains d. bridges

40. Clouds are formed due to the process.

- a. melting b. collection c. condensation d. freezing

41. When air is heated, its changes.

- a. mass b. smell c. color d. density

42. The components that are not found in the soil include

- a. living organisms b. minerals
c. water and air d. sunlight

43. The water vapor in the atmosphere can condense and form

- a. air b. clouds c. sunlight d. wind

44. The body structure of a polar bear that allows it to live in cold regions is considered

- a. a behavioral adaptation
- b. a reproductive way
- c. a structural adaptation
- d. an environmental change

45. The thermometer is used to

- a. measure the temperature
- b. know tomorrow's weather
- c. predict the time of rainfall
- d. measure wind speed

46. All the following are water reservoirs, except

- a. seas
- b. glaciers
- c. the moon
- d. living organisms

47. Silt soil contains particles and its color is

- a. large - yellow
- b. large - dark
- c. medium - dark
- d. medium - gray

48. In regions, the rate of evaporation would be the highest.

- a. moderate
- b. hot
- c. cool
- d. polar

49. The density of hot, humid air is that of cold, dry air.

- a. more than
- b. less than
- c. equal to
- d. similar to

50. All the following are from the abiotic factors in an ecosystem, except

- a. air
- b. sunlight
- c. water
- d. plants

51. The organic materials which are found in the soil include

- a. air
- b. water
- c. rocks
- d. humus

52. The is used to measure the current atmospheric pressure.

- a. anemometer
- b. barometer
- c. thermometer
- d. rain gauge

53. causes the falling of ice in glaciers from a higher altitude to a lower altitude.

- a. Convection
- b. Sunlight
- c. Gravity
- d. Wind

54. A when strong winds blow up sand from dry areas, such as deserts.

- a. drought
- b. desertification
- c. flood
- d. sandstorm

55. The amount of water vapor in the air is known as

- a. humidity
- b. evaporation
- c. condensation
- d. the clouds

56. Coastal mountains ranges often have two sides, which are side and side.

- a. narrow - wide
- b. wet - dry
- c. high - low
- d. dark – dry

57. The bog ecosystem has soil.

- a. sand
- b. gravel
- c. clay
- d. silt

58. Leakage of water into groundwater reservoirs is due to the action of

- a. condensation
- b. gravity
- c. precipitation
- d. evaporation

59. Wind is produced by the help of

- | | |
|--------------------|-----------------------|
| a. water turbines | b. electric generator |
| c. solar radiation | d. electric motor |

60. The transfer of genetic factors happen in

- | | |
|-----------------------|--------------------------------|
| a. humans only | b. animals only |
| c. humans and animals | d. humans, animals, and plants |

61. All the following instruments are used to measure weather conditions, except

- | | |
|-------------------|---------------------|
| a. anemometers | b. weather balloons |
| c. weather radars | d. barometers |

62. All the following are flooding damages, except

- | | |
|----------------------------------|-------------------------------------|
| a. reducing visibility | b. drowning of livestock and people |
| c. disrupting life and economies | d. buildings damage |

63. The anemometer is used to measure

- | | |
|----------------|-------------------------|
| a. rainfall | b. wind speed |
| c. temperature | d. atmospheric pressure |

64. The evaporation of water from plants leaves is called

- | | | | |
|-----------------|------------------|---------------|----------------|
| a. condensation | b. transpiration | c. collection | d. respiration |
|-----------------|------------------|---------------|----------------|

✳(3) Complete the following:

1. Formation of fog is due to the of on a field in early morning.
2. Overuse of and cause depletion of the soil.
3. Water vapor comes out from plant through the
4. To reduce pollution we have to keep green areas, and treat and industrial water.
5. Sand soil allow water to flow while soil allows water to flow slowly.
6. Sea water absorbs heat and loses it
7. During convection current, air moves up, while air falls down.
8. Land heats up and cools down compared to that of water.
9. A thermometer is used to measure , while a barometer is used to measure
10. Heat transfers by convection in and
11. According to the size of particles in the soil, are the biggest particles while are the smallest particles.
12. The three main processes which are responsible for movement of water through the water reservoirs on the Earth are evaporation, and
13. The sunlight, soil, temperature, and precipitation are examples of factors.
14. When water changes from a solid state to a liquid state, it energy.
15. Water can be pulled downward by force.
16. Extreme hot temperatures in an area for long time may cause
17. Clay soil can retain more water, while can retain a small amount of water
18. Hot air rises up as it has density than cold air.
19. Transpiration is a form of the process.
20. During rainfall, the soil of humid areas retains amount of water.

✱(4) **Correct the underlined word :**

1	Minerals are the building blocks of <u>plants</u> .	(.....)
2	<u>Sand</u> soil has a gray color.	(.....)
3	<u>Birman</u> cat doesn't have any hair or have only very fine hair.	(.....)
4	The heat of the Sun transfers through space to Earth's atmosphere by <u>convection</u> .	(.....)
5	The force that the atmospheric air exerts on a certain area of Earth's surface is known as <u>gravity</u> .	(.....)
6	In the water cycle, the process that follow condensation process is <u>run off</u> .	(.....)
7	<u>Sand</u> soil has dark color.	(.....)
8	Anemometer is used to measure speed of <u>precipitation</u> .	(.....)
9	Eye color is one of the <u>environmental</u> factors that are transmitted to offspring.	(.....)
10	Birds migration is an example of <u>structural</u> adaptation.	(.....)
11	The least amount of rain falls on <u>rainforest</u> biome.	(.....)
12	Due to <u>radiation</u> currents warm water moves above cold water	(.....)
13	The measure of how much water vapor is present in the air is called <u>meteorology</u> .	(.....)
14	Light is from the <u>biotic</u> factors in an ecosystem.	(.....)

*** (5) Put (√) or (X):**

- | | |
|--|--------|
| 1. Water flows through sand soil faster than in clay soil. | () |
| 2. Ecosystem contains biotic factors and abiotic factors. | () |
| 3. When the air is cooled, it rises up. | () |
| 4. Sand is cooled down slower than water. | () |
| 5. From the factors that determine the wind direction is the rotation of the Sun. | () |
| 6. Emperor penguin and African penguin live in the same homeland. | () |
| 7. Sandstorms decrease the visibility during driving cars. | () |
| 8. All living organisms depend on soil to get their needs. | () |
| 9. Acacia trees and palms are adapted to live in desert environment. | () |
| 10. Genes carry inherited traits from parents to their offspring. | () |
| 11. The weather of the area near the equator is very cold. | () |
| 12. There is no Sphinx cat has long hair like Birman cat. | () |
| 13. Sandstorms blow up from dry areas such as seas and oceans. | () |
| 14. Particles of air which have high temperature and low density sink down. | () |
| 15. Biotic factors of an ecosystem include sunlight, air and water. | () |
| 16. The size of sand soil particles is smaller than that of silt and clay particles. | () |
| 17. Hottest regions are regions in which the evaporation process is the greatest. | () |
| 18. Direction of wind is determined by amount of solar radiation received by Earth. | () |
| 19. Most of animals which live in arctic environment have dark and thin fur. | () |
| 20. From the factors that determine the wind direction is the rotation of the Sun. | () |
| 21. Growth of plant toward light is an example of behavioral adaptation. | () |
| 22. Cleaning up water from pollution is more effective than preventing it. | () |
| 23. Water reservoirs on the Earth include oceans and seas only. | () |
| 24. As the air is warmed by the Sun, the air will go up. | () |
| 25. Melting and transpiration processes only occur by cooling | () |
| 26. Sand soil has small-sized particles. | () |
| 27. Although flooding is harmful, it also has some benefits. | () |

28.Heat of the Sun transfers through space to the Earth's atmosphere by convection.	()
29.Sand absorbs heat slower than water during the daytime.	()
30.The difference between sand soil and clay soil is in the color only.	()
31.Birds migrate to areas that have no food or water.	()
32.The force of gravity affects the movement of water in the water Cycle.	()
33.The weight of air above a certain area is known as temperature.	()
34.Offsprings receive their environmental factors from their parents.	()
35.Soil is important for animals only.	()
36.Environmental factors can affect the health and growth of man.	()
37.The weather radar is used to measure the wind speed.	()
38.Clouds are formed due to the melting process.	()
39.The density of air decreases by increasing its temperature.	()
40.Abiotic factors affect the growth and the adaptation of biotic factors.	()
41.The large salt lake in turkey dries up when the weather is cold.	()
42.Soil is the home of some living organisms.	()
43.Cold air rises above hotter air.	()
44.There is a very large amount of rain in the desert	()
45.Birman cats have very long silky hair.	()
46.Precipitation occurs after condensation of water vapor in the sky.	()
47.Bird migration is an example of physical adaptation.	()
48.Desertification is a process by which land becomes more fertile.	()
49.The lionfish is a native species in the Red Sea areas.	()
50.Clay soil retains more water than sand soil.	()
51.The African penguin has thick blubber and dense feathers to keep its body warm.	()
52.The Sphynx cat doesn't have the genetic factor for long, silky hair.	()
53.The weather of the area near the equator is very cold.	()
54.Type of soil differ in their color and their ability to hold water.	()
55.A rain shadow is an area that is formed behind trees.	()

✱(6) Give reason for:

1. Moving down of glaciers from the top of a mountain to its foot.
.....
2. Desert farming faces many difficulties.
.....
3. Lizard body is covered with sandy-colored scales.
.....
4. Drying up of the large salt lake in Turkey in summer season.
.....
5. Water can flow fast through sand soil.
.....
6. Some desert's plants have long roots.
.....
7. Sandstorms have harmful effects on the human health.
.....
8. The effect of heat is low in the area at the north and south of the equator.
.....
9. Sphynx cats don't have long hair.
.....
10. A fog is formed in the early morning.
.....
11. Birds migrate from one place to another.
.....
12. A shallow lake dries up in summer.
.....
13. Hot air moves upward above cold air.
.....
14. The poison dart frog has colorful, poisonous skin.
.....
15. About 10% of the water vapor in air comes from plants.
.....
16. The area near the equator is very hot.
.....
17. Decomposers have an important role in the formation of soil.
.....

✱(7) What happen if / to?

1. The plant receive too intense light.
.....
2. The genetic factor of hairless body trait is transferred from Sphynx cat parents to their offspring.
.....
3. The dust accumulates on solar panels
.....
4. Water and light are not available
.....
5. Rain falls on a desert in suitable quantities
.....
6. The air density, as we move down toward the bottom of a mountain.
.....
7. The water droplets in clouds when they become bigger and heavier.
.....
8. The level of water in a lake when the rate of evaporation increases.
.....
9. The snow when sunlight falls on it.
.....
10. Water vapor in air condenses in the sky.
.....
11. Atmospheric pressure, as we move up toward top of mountain.
.....
12. The water movement when heated in a pot.
.....
13. The air temperature if there is no wind on Earth.
.....
14. The density of air if it is warmed by the effect of solar energy.
.....
15. The temperature of a desert sand at night.
.....

*** (8) Complete the following sentences by using these words:****1. (transpiration - density - gains – humidity - erosion)**

1. Cold water has more than warm water, so it moves under the warm water.
2. Increasing the inclination of the Earth's surface, increase the process of soil.
3. The form of evaporation process that takes place from leaves of plant called
4. When water liquid change into water vapor, it heat.
5. The measure of how much water vapor is present in the air

2. (structural - light – precipitation – dry – gravity)

1. Convection and force affect the movement of water through the water cycle.
2. Food, water and are the basic needs for living organisms to live and survive.
3. Sand soil is and has loose soil, so large trees can't grow in it.
4. When the water droplets in clouds become too heavy, it causes
5. Thick fur is an example of adaptation for animals that live in polar climates.

3. (worms – insects – soil – density – convection)

1. Heat is transferred through the atmosphere by
2. From living organisms that live in soil are and
3. The thin layer which covers the Earth's crust is called
4. Cold water has more than warm water.

4. (water - condensation - shorter - minerals - drought)

1. At noon, sand gets hot in a time than water.
2. The building units of rocks are
3. Formation of fog is due to the of water vapor.
4. Some desert plants have thick leaves to store
5. Extreme hot temperatures may cause

5. (meteorologist - evaporation - humidity – genes - solar)

1. The carry inherited traits from the parents to their offsprings.
2. Transpiration is a type of in plants.
3. The amount of water vapor present in the atmosphere is called
4. The scientist who studies the Earth's atmosphere is called a
5. The amount of energy that reaches the Earth affects in rate evaporation in the water Cycle.

(9) Choose from column (B) what suits it in column (A) :*1.**

A	B
1. Acacia tree	a. it lives in Antarctic.
2. Poison dart frog	b. inherited in animals.
3. Emperor penguin	c. inherited in plants.
4. Leaves shape trait	d. it lives in desert.
5. Fur length trait	e. it lives in tropical rain forest.

1. 2. 3. 4. 5.

2.

A	B
1. Precipitation	a. is the flowing of a river's water into a sea.
2. Run off	b. has thick white fur.
3. Arctic fox	c. is the falling of snow in an area.
4. Acacia tree	d. lives in the desert.

1. 2. 3. 4.

3.

A	B
1. An anemometer	a. measures the atmospheric pressure.
2. A weather radar	b. measures the wind speed.
3. A rain gauge	c. measures the intensity of precipitation.
4. A barometer	d. measures the amount of rain.

1. 2. 3. 4.

✱(10) TRY TO ANSWER:

1. Mention the importance of the following:

1. Thermometer:
2. Rain Guage :
3. Anemometer :
4. Barometer

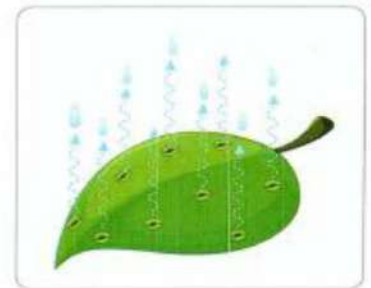
2. Mention examples of:

1. water reservoirs
.....
2. Migratory birds in Egypt.
.....
3. Structural adaptation in animals that live in cold climate.
.....
4. Biotic factor:
.....
5. Abiotic factor:
.....

3. Look at the opposite figure, then answer the questions :

1. The process which takes place in this figure is considered as a form of process.

- | | |
|------------------|----------------|
| a. condensation | b. evaporation |
| c. precipitation | d. collection |



2. The process which takes place in this figure can produce about of water vapor that is found in the air.

- | | | | |
|-------|-------|--------|--------|
| a. 5% | b. 7% | c. 10% | d. 15% |
|-------|-------|--------|--------|

4. These following figures represent particles of different types of soil:



Figure (1)

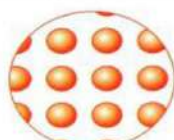


Figure (2)



Figure (3)

1. Figure (1) represents soil. (sand - silt - clay)
2. Figure retains small amount of water. (1 - 2 - 3)

Model Answer

*(1) Write the scientific term:

1. Gravity	9. Behavioral adaptation	17. Minerals	26. Abiotic factor
2. Soil	10. Weathering process	18. Anemometer	27. Silt soil
3. Structural adaptation	11. Genes	19. Atmospheric pressure	28. Meteorology
4. Decomposer	12. Clouds	20. Wet side	29. Adaptation
5. Collection	13. Flooding	21. Transpiration	30. Antarctic
6. Meteorologist	14. Condensation process	22. Barometer	31. Evaporation process
7. Runoff	15. Ecosystem	23. Clay soil	
8. Red sea	16. Sun	24. Radiation	
		25. Biotic factor	

*(2) Choose the right answer:

1. B	9. A	17. A	25. D	33. B	41. D	49. B	57. C
2. A	10. C	18. B	26. B	34. D	42. D	50. D	58. B
3. C	11. D	19. A	27. B	35. A	43. B	51. D	59. C
4. D	12. C	20. D	28. D	36. B	44. C	52. B	60. D
5. A	13. A	21. C	29. B	37. B	45. A	53. C	61. B
6. D	14. C	22. B	30. A	38. A	46. C	54. D	62. A
7. B	15. B	23. A	31. B	39. C	47. D	55. A	63. B
8. A	16. D	24. D	32. C	40. C	48. B	56. B	64. B

*(3) Complete the following:

1. Condensation – water vapor	8. quickly – quickly	15. gravity
2. Pesticides – chemical fertilizer	9. temperature – atmosphere pressure	16. drought
3. Leaves – stomata	10. liquids – gases	17. sand soil
4. Water – sewage	11. sand – clay	18. less
5. Fast – clay	12. condensation – precipitation	19. evaporation
6. Slowly – slowly	13. abiotic	20. large
7. Hot – cold	14. gain	

*(4) Correct the underlined word :

1. rocks	5. Air pressure	9. Genetic	13. Humidity
2. silt	6. Precipitation	10. Behavioral	14. Abiotic
3. sphynx	7. Clay	11. Desert	
4. radiation	8. Wind speed	12. Convection	

*(5) Put (√) or (X):

1. (√)	8. (√)	15. (X)	22. (X)	29. (X)	36. (√)	43. (X)	50. (√)
2. (√)	9. (√)	16. (X)	23. (X)	30. (X)	37. (X)	44. (X)	51. (X)
3. (X)	10. (√)	17. (√)	24. (√)	31. (X)	38. (X)	45. (√)	52. (√)
4. (X)	11. (X)	18. (√)	25. (X)	32. (√)	39. (√)	46. (√)	53. (X)
5. (X)	12. (√)	19. (X)	26. (X)	33. (X)	40. (√)	47. (X)	54. (√)
6. (X)	13. (X)	20. (X)	27. (√)	34. (X)	41. (X)	48. (√)	55. (X)
7. (√)	14. (X)	21. (√)	28. (X)	35. (X)	42. (√)	49. (√)	

*(6) Give reason for:

- Due to the effect of gravity on glaciers.
- Because the desert's climate is hot and the amount of water is small.
- To hide among rocks in desert.
- Due to the increase in the evaporation of the lake water.
- Because it has large amount of pore spaces between its particles.
- To get the deep groundwater.
- Because sandstorms harm the human eyes and respiratory system.
- Because the sun rays fall semi-inclined on Earth's surface of these areas, so the weather is warm.
- Because it doesn't have the genetic factor for long hair.
- Due to condensation of water vapor that is found in the air.
- To search for the best conditions that help them reproduce and preserve their species.
- Due to the increase in the evaporation of the lake water.
- Due to the effect of convection, where hot air has less density, so it rises upward, while cold air has more density, so it falls down.
- To protect itself from predators.
- Due to transpiration process which happens by plants.
- Because the sun rays fall perpendicular on Earth's surface giving high effect of heat.
- Because decomposers recycle the remains of dead plants and animals.

***(7) What happen if / to?**

1. The too intense light may damage the plant's parts.
2. The trait of hairless body appears on the offspring.
3. Solar panels stop generating energy.
4. Living organisms can't survive and will die.
5. The plant will grow in desert
6. The air density will increase.
7. They are fall down to Earth's surface due to gravity.
8. The level of water will decrease.
9. The snow will melt and change into liquid water.
10. Clouds are formed in the sky.
11. The atmospheric pressure will decrease.
12. Hot water moves up and cold water falls down.
13. The regions around the equator become extremely hot and the poles will completely freeze.
14. The density of the air will decrease (becomes low).
15. The temperature of a desert sand will decrease.

***(8) Complete the following sentences by using these words:**

1	<ol style="list-style-type: none"> 1. Density 2. Erosion 3. Transpiration 4. Gains 5. humidity 	2	<ol style="list-style-type: none"> 1. gravity 2. light 3. dry 4. precipitation 5. structural
3	<ol style="list-style-type: none"> 1. convection 2. worms – insects 3. soil 4. density 	4	<ol style="list-style-type: none"> 1. shorter 2. minerals 3. condensation 4. water 5. drought
5	<ol style="list-style-type: none"> 1. genes 2. evaporation 3. humidity 4. meteorologist 5. solar 		

***(9) Choose from column (B) what suits it in column (A) :**

1	1. d 2. e 3. a 4. c 5. b	2	1. c 2. a 3. b 4. d
3	1. b 2. c 3. d 4. a		

***(10) TRY TO ANSWER:**

1	<ol style="list-style-type: none"> 1. measures the temperature. 2. measures the amount of rain in a certain area. 3. that measures the wind speed. 4. measures the atmospheric pressure. 	2	<ol style="list-style-type: none"> 1. sea or river 2. Falcons – Eagles 3. Thick fur 4. Animals 5. Water
3	<ol style="list-style-type: none"> 1. B 2. C 	4	<ol style="list-style-type: none"> 1. Clay 2. (2)

حمل الآن

مجانا وحصريا

المراجعة رقم (5)

الترم الثاني



G6 Final Revision (2nd term)

Choose the correct answer:

- 1- All the following are considered as the main processes in transferring water through water reservoirs, except.....
a) condensation b) evaporation c) collection d) precipitation
- 2- In winter, rain falls due to process.
a) condensation b) evaporation c) collection d) precipitation
- 3- When water runs through a river then into a sea, this step is called.....
a) runoff. b) condensation. c) precipitation. d) evaporation.
- 4- Gathering the water of rains to form streams or rivers is called
a) precipitation. b) evaporation. c) collection. d) condensation.
- 5- The Sun heats the water of seas and this leads to occurrence of process.
a) freezing b) melting c) evaporation d) condensation
- 6- The form of water that is found in air and we can't see it is the
a) liquid water. b) water vapor. c) Ice. d) snow.
- 7- The condensed water vapor in clouds returns back to the Earth's surface in the form of all the following, except.....
a) water vapor. b) rain. c) snow. d) sleet.
- 8- Leakage of water into groundwater reservoirs is due to the action of.....
a) condensation. b) gravity. c) precipitation. d) evaporation.
- 9- Both of..... and processes happen due to the decrease of thermal energy.
a) Melting – freezing b) melting – condensation
c) freezing – condensation d) melting – evaporation
- 10- The weather of the areas near the equator is
a) hot and humid. b) hot and snowy.
c) warm and humid. d) warm and snowy.
- 11- Moderate regions are areas in which the evaporation process is.....
a) the greatest. b) the smallest. c) moderate. d) absent.

- 12-** When the sun rays fall semi-inclined on Earth's surface, it is distributed on a large area giving effect of heat and the weather becomes.....
- a) high – warm. b) low – warm. c) high – cold. d) low – cold.
- 13-** Water vapor in the atmosphere can condense and form.....
- a) air. b) clouds. c) sunlight. d) wind.
- 14-** The form of evaporation process that takes place from the leaves of plants is called
- a) transpiration. b) collection. c) melting. d) freezing.
- 15-** When a liquid is heated, it will and become less dense and
- a) expand — heavier. b) contract — lighter.
c) expand - lighter. d) contract — heavier.
- 16-** Due to the very little rains which precipitate in some areas on Earth, large areas of are formed.
- a) forests b) seas c) oceans d) deserts
- 17-** Convection currents in the atmosphere are controlled by
- a) precipitation. b) moon's rotation.
c) the energy from the Sun. d) Earth's rotation.
- 18-** Convection is a way of transferring of heat in liquids and gases due to the difference in and
- a) mass – color. b) shape – volume.
c) temperature – density. d) color – temperature.
- 19-** Wind is produced by the help of
- a) water turbine. b) electric generator.
c) solar radiation. d) electric motor.
- 20-** Wind is formed when rises and replaced by that flows from nearby areas.
- a) warm air – cold air b) warm water – cold water
c) cold air – warm air d) cold water – warm water
- 21-** When air is heated, its changes.
- a) mass b) smell c) color d) density

- 22-** Heat is transferred through the atmosphere by
 a) convection. b) conduction. c) reflection. d) absorption.
- 23-** Desert farming depends on the maximum use of....., as its quantity is very small.
 a) sand b) sunlight c) water d) winds
- 24-** A rain shadow is an area that is formed behind a
 a) tree. b) mountain. c) building. d) bridge.
- 25-** If the temperature at the bottom of a mountain is 15 °C, this means it may reach.....°C at the top of this mountain.
 a) 30 b) 25 c) 20 d) 2
- 26-** If the temperature of the sand in a desert is 50 °C at noon, its temperature may reach°C at night.
 a) 20 b) 60 c) 70 d) 80
- 27-** Extreme weather conditions include all the following, except
 a) drought. b) flooding. c) sandstorms. d) sunrise.
- 28-** Drought affects all the following, except
 a) people. b) plants. c) buildings. d) animals.
- 29-** Floods may occur as a result of and
 a) gentle rain – melting of snow. b) heavy rain – melting of snow.
 c) gentle rain – freezing of water. d) heavy rain – evaporation of water.
- 30-** Birds migrate to search for all of the following, except.....
 a) best conditions for reproduction. b) different food resources.
 c) another suitable habitat. d) another unsuitable climate.
- 31-** Migratory birds may suffer from all of the following conditions during their journey, except.....
 a) many resting sites are available. b) presence of predators.
 c) shortage of food. d) shortage of water.
- 32-** The Red Sea in Egypt includes all of the following environments, except..... environment.
 a) marine b) mountain c) rain forest d) coastal
- 33-** All the following are biotic factors, except.....
 a) animals. b) insects. c) precipitation. d) grasses.

- 34- Plants, animals and water are.....
- a) biotic factors only.
 - b) abiotic factors only.
 - c) biotic and abiotic factors.
 - d) behavioral characteristics.
- 35- Plants respond to the amount of..... they receive daily.
- a) light only
 - b) dark only
 - c) light and dark
 - d) biotic factors
- 36- Dorcas gazelle lives in.....
- a) tropical area.
 - b) desert area.
 - c) north pole.
 - d) south pole.
- 37- Increasing the number of different animal species is affected by an environmental factor which is.....
- a) the body size of animals.
 - b) the body color of animals.
 - c) the length of plants.
 - d) the size of habitat.
- 38- Acacia tree and arctic fox live in.....
- a) desert environment.
 - b) arctic environment.
 - c) rain forest environment.
 - d) two different environments.
- 39- The genetic factors transfer from.....
- a) living organism to nonliving thing.
 - b) nonliving thing to living organism.
 - c) parents to their offspring.
 - d) offspring to their parents.
- 40- Transferring of genetic factors happens in.....
- a) humans only.
 - b) humans and animals only.
 - c) nonliving things.
 - d) all living organisms only.
- 41- All the following are inherited traits in humans, except.....
- a) eye color.
 - b) nose shape.
 - c) fur color.
 - d) ear shape.
- 42- All the following are inherited traits in plants, except.....
- a) leaves color.
 - b) leaves shape.
 - c) length of stem.
 - d) length of ears.
- 43- Sphynx cats and birman cats are different in the.....
- a) number of eyes.
 - b) number of ears.
 - c) number of legs.
 - d) length of hair.
- 44- Bad habits in human lifestyle include.....
- a) eating healthy food.
 - b) doing exercises.
 - c) drinking more soda.
 - d) avoid smoking.

- 45-** The soil provides the plant with all of the following, except.....
- a) water. b) air. c) nutrients. d) sunlight.
- 46-** From the main factors that cause the soil formation are.....and.....
- a) erosion – evaporation. b) weathering – condensation.
c) erosion – weathering. d) melting – gravity.
- 47-** The material rich in nutrients and produced from the decomposition of dead organisms is called.....
- a) decomposers. b) humus. c) sand. d) water.
- 48-** The organic materials which are found in the soil include.....
- a) sand and remains of dead organisms. b) humus and silt.
c) remains of dead animals and plants. d) silt and clay.
- 49-** Soil can be classified into..... different types according to its kind of particles.
- a) two b) three c) four d) five
- 50-** When the soil contains large amount of sand particles, the flow of water will.....
- a) not change. b) increase. c) decrease. d) stop.
- 51-**soil contains large amount of sand particles.
- a) Sand b) Silt c) Clay d) Fertile
- 52-** The soil that retains medium amount of water becomes.....
- a) more fertile. b) less fertile. c) unsuitable for planting. d) very dry.
- 53-** soil holds water well so, it becomes..... most of time.
- a) Sand – wet b) Clay – wet c) Clay – dry d) Silt – dry
- 54-** Overuse of..... are from the reasons of soil depletion.
- a) water and air b) pesticides and chemical fertilizers
c) air and fertilizers d) water and pesticides
- 55-**are from the ways of soil restoration.
- a) Adding nutrients to the soil and deforestation
b) Overuse of pesticides and water pollution
c) Overgrazing and planting different types of crops
d) Adding nutrients to the soil and planting different types of crops

- 7- Flamingos migrate to the large salt lake in Turkey when the weather becomesand they are feed onwhich are found in this lake.
- 8- Increasing and decreasing of water level in some lakes is due to the transfer of..... through the water cycle.
- 9- About 10 % of the water vapor in air comes from.....of plants.
- 10- Transpiration is a form of..... that takes place through thewhich are found in plant leaves.
- 11-consist of millions of tiny water droplets that have condensed out of the air.
- 12- When warm air contains enough water vapor, it loses this water in the form of.....
- 13- Fresh water changes into water vapor when itthermal energy, while fresh water changes into ice when itthermal energy.
- 14- The distribution ofenergy on the Earth's surface plays an important role in evaporation process in the water cycle.
- 15- The weather becomes hot when the sun rays fallon Earth's surface.
- 16- The weather of the area faraway from the equator is..... because the sun rays fallon the Earth's surface at this area.
- 17- By increasing the temperature of air, its density.....
- 18- The difference in theandin water of oceans and atmosphere occurs due to the unequal heating of land and oceans.
- 19- Due to convection,air moves upward aboveair.
- 20- Heat can transfer through the Earth's atmosphere due to the effect ofcurrents.
- 21- Cold water has morethan warm water, so it moves under the warm water.
- 22- Unequal heating of the Earth between the poles and the equator generates.....
- 23- When warm air is cooled, it will move, while cold air moveswhen it is warmed.
- 24- Heat transfers from theobject to theobject.

- 25- The amount of water that evaporates isthan the amount of rain that falls on deserts.
- 26- At the top of the mountain, the atmospheric pressure is..... compared to the bottom of the mountain.
- 27- As you climb to the top of a mountain, the air density will, while as you move down toward the bottom of it, the air temperature will.....
- 28- The side of coastal mountain ranges that faces the coast in which air moves up when hitting a mountain is theside, while the other side is theside.
- 29- When the hot and humid air meets the cold and dry air, the.....air rises.
- 30- Gases and liquids expand byand contract by.....
- 31- Sand cools down in atime than sea water during nighttime.
- 32- The temperatures of both water and sandin the presence of a source of heat.
- 33- Sea water absorbs heat slowly and loses it.....
- 34- The measure of how much water vapor is present in the air is called.....
- 35- The horizontal movement of air is called, whereas the vertical movement of air is called.....
- 36- To know whether it rained more this summer or last summer, the meteorologist should use.....
- 37- To know the possible path of a hurricane; the meteorologist should use.....
- 38- Meteorologists useto collect and analyze data from different places and over short periods of time.
- 39- Extreme hot temperatures may cause, while heavy rain may cause.....
- 40- The adaptation that is related to the body structure of a living organism is known asadaptation.
- 41- Thorns on a plant stem are an example ofadaptation, while growth of plant toward light is an example ofadaptation.

- 42- Migration of animals to search for food is considered as a type ofadaptation.
- 43- The thick fur of animals that live in cold areas is considered as a type ofadaptation.
- 44- Ecosystem containsfactors andfactors.
- 45-factors include nonliving things in an ecosystem.
- 46- Light,andare basic needs for plants to grow.
- 47- Both offactors andfactors affect the growth of living organisms.
- 48- Photosynthesis process is affected by some environmental factors such as availability ofand.....
- 49- The plant's growth is affected byandof light.
- 50- Chrysanthemum plant produces flowers when the days arethan the nights.
- 51- Hot deserts have a little amount offar below the ground surface.
- 52- Some plants like palms and acacia trees live in the..... environment in Egypt.
- 53- Some desert plants haveon their stems and branches to protect them from herbivores.
- 54- Some desert plants can store water in theirand.....
- 55- The body size of animals and the length of plants are two..... factors that affect their growth.
- 56-penguin lives in Antarctic and it has a thick..... layer and its skin covered with denseto keep its body warm.
- 57- African penguin has a circle of skin that doesn't have any..... around each of its eyes.
- 58-has sandy-colored scales and lives in.....
- 59- Appearance of inherited traits on offspring is due to passing downfactors from their parents.
- 60-are responsible for determining the body feature, and present in the cell.....

- 61-cats have long, silky hair with different colors.
- 62-cat doesn't have the genetic factor of long hair.
- 63- Color and place of the flower are twotraits in plants.
- 64- The soil is composed ofandingredients.
- 65- Soil is the shelter for many living organisms, such as worms,, fungi and
- 66- Soil is composed of many inorganic ingredients as air,,and minerals.
- 67- The processes which play an important role in the soil formation are,and deposition.
- 68- Silt particles are larger thanparticles and smaller thanparticles.
- 69-is a material that makes the soil fertile and produced from decomposition of organic material of dead organisms.
- 70- The remains of dead plants and animals are decomposed into chemical nutrients such as, nitrogen and
- 71- There are spaces between the particles of the soil called..... and they are filled withand.....
- 72-play an important role in recycling the nutrients to the soil.
- 73- Sand,andparticles are products of rocks weathering.
- 74-soil contains medium particles and its color is gray.
- 75- The ability of silt soil to retain water is larger thansoil.
- 76- Waterlogged soil contains large amount ofand little amount ofand this doesn't help roots to grow.
- 77-are grassland ecosystems that contain dry..... soil and are common in central Africa.
- 78- The type of soil that is found in bog ecosystems issoil.
- 79- Types of plants in the soil affect theand of the ecosystem.
- 80- The moist conditions in bogs lead to verytemperature and they are suitable for some plants to grow in them.

- 81-, drought orcause the increase of the infertility of the land and desertification.
- 82- Increasing the inclination of the Earth's surface increases the..... process of the soil.
- 83- To reduce the soil erosion processareas should be increased.
- 84- Adding sand andto the soil helps in decreasing the effect of moving water over the soil.
- 85- All habitats provide the living organisms with food,,and space.
- 86- Habitat destruction could happen due to and.....
- 87- Human activities like pollution and waste produced by humans led to increase in the percentage ofgas and increase in the Earth's
- 88- Streams,andare examples of natural habitats.
- 89- Hurricanes, forests fires and volcanic eruptions are from the that destroy habitats.
- 90- Using soil fences andponds help in reducingpollution.
- 91- Soil scientists hope to stop using traditionaland..... which are used in building houses.
- 92- To produce traditional bricks, a lot ofis required and a lot ofis produced.
- 93- The glue-like substance which is used in binding materials together is formed from thechange of the.....

Write the scientific term:

- 1- The movement of water through different water reservoirs on the Earth. (.....)
- 2- They are the places of storing water on the Earth. (.....)
- 3- It is the process in which matter changes from liquid state to gas state. (.....)

- 4- It is the process in which matter changes from gas state to liquid state. (.....)
- 5- Large areas of land which are formed due to the effect of dry air (.....)
- 6- It is the method by which heat transfers within liquids and gases, where hot molecules rise upward, while colder molecules fall down. (.....)
- 7- It is caused when air warmed by the solar radiation rises and then replaced by cooler air that flows from nearby areas. (.....)
- 8- It is the main source which is responsible for warming of air and forming wind. (.....)
- 9- A side of mountain ranges at coastal regions in which the rain shadow phenomenon occurs. (.....)
- 10- The science that studies the weather conditions. (.....)
- 11- It is the weight of the air above an area. (.....)
- 12- It is a natural phenomenon that occurs when the level of water in a river increases until it overflows its banks. (.....)
- 13- A phenomenon in which very strong winds blow up dust that reduces the visibility during driving cars. (.....)
- 14- A process through which the living organism be able to live and survive in its environment. (.....)
- 15- It is a change in the behaviors or acts of a living organism to help them to survive. (.....)
- 16- It is a type of behavioral adaptation in which animals move in a certain season from one place to another. (.....)
- 17- It contains biotic factors and abiotic factors that interact with each other. (.....)
- 18- The factors that include living organisms in an ecosystem. (.....)
- 19- They are tiny structures that found in the cell nucleus. (.....)
- 20- It is the factor that controls which traits get inherited from parents to their offspring. (.....)
- 21- They are external factors that affect our health and we might not able to control them. (.....)
- 22- The loose layer that covers Earth's surface. (.....)
- 23- A type of soil that allows water to flow slow as it has small pore spaces between its particles. (.....)
- 24- The dark (black) soil that can retain large amount of water.(.....)

- 25- A type of soil that retains medium amount of water and has medium pore spaces between its particles. (.....)
- 26- The distances between the particles of the soil. (.....)
- 27- A type of soil that is dry and loose, so large trees can't grow in it. (.....)
- 28- The place where living organisms live. (.....)

Put (✓) or (x):

- 1- Water reservoirs on the Earth include oceans and seas only. ()
- 2- Precipitation occurs after condensation of water vapor in the sky. ()
- 3- Rains fall and collect in oceans by the effect of gravity force. ()
- 4- States of water change when water gains or loses energy. ()
- 5- When fresh water changes into snow and ice, this means that fresh water gains thermal energy. ()
- 6- Melting and transpiration processes only occur by cooling. ()
- 7- When water vapor cools in the sky, it forms clouds. ()
- 8- Flamingos migrate to the large salt lake in Turkey when the weather is very cold there. ()
- 9- All places on Earth receive the same amount of sunlight. ()
- 10- Hottest regions are regions in which the evaporation process is the greatest. ()
- 11- The weather becomes cold when the sun rays fall semi-inclined on Earth's surface. ()
- 12- As a result of low temperature, water returns back into water vapor. ()
- 13- Convection causes the movement of low density air above the high density air. ()
- 14- Convection currents in Earth's atmosphere help in determining the regional climate. ()
- 15- When convection occurs in the atmosphere cold air rises up and warm air falls down. ()
- 16- The direction of wind is determined by the amount of solar radiation received by the Earth. ()

- 17- The rain never falls on deserts. ()
- 18- People in desert areas face a lot of challenges in desert farming. ()
- 19- Solar energy and wind turbines can be used to operate desert farms. ()
- 20- The amount of precipitation is large in deserts. ()
- 21- Reusing water is a useful way to irrigate crops in desert farms. ()
- 22- The properties of the atmosphere at the top of the mountain and at its bottom are similar. ()
- 23- A wet side of a coastal mountain range is away from the coast. ()
- 24- The air becomes more dense at the top of the mountain compared to the bottom of the mountain. ()
- 25- The temperatures of both water and sand increase at the same rate when they are exposed to the same amount of heat. ()
- 26- Land heats up quickly and cools down slowly compared to that of water. ()
- 27- Scientists use some tools that help them in predicting weather conditions. ()
- 28- Mapping data allows meteorologists to represent data about weather conditions. ()
- 29- When rain doesn't fall, soil may dry and plants may die. ()
- 30- Although flooding is harmful, it also has some benefits. ()
- 31- Floods may cause death of people and animals. ()
- 32- Sandstorms decrease the visibility during driving cars. ()
- 33- Dust storms have harmful effects on the plane engines. ()
- 34- Animals migrate from one place to another seasonally. ()
- 35- Migratory birds are affected by environmental factors during their migration. ()
- 36- Birds migrate to search for different food sources. ()
- 37- Animals need food, water and habitat to survive. ()
- 38- The growth of living organisms is not affected by environmental factors around them. ()
- 39- In our world there are different kinds of environments. ()
- 40- Different types of environments have different types of plants and animals. ()
- 41- An area between buildings that contains grasses, insects and weeds represents a large ecosystem. ()

- 42- Ecosystems include living organisms only. ()
- 43- Abiotic factors of an ecosystem can eat, breathe and grow. ()
- 44- In the arctic ecosystem, caribou feeds on wolves. ()
- 45- It is easy for animals to live in the desert environments. ()
- 46- Deserts may be hot areas or cold areas. ()
- 47- Dorcas gazelle can live in both desert area and semi-desert area. ()
- 48- The skin of poison dart frog cannot protect it from predators. ()
- 49- Abiotic factors affect the growth and the adaptation of biotic factors. ()
- 50- The length of plants is from genetic factors which affects their growth. ()
- 51- The plant's growth is not affected by intensity of light. ()
- 52- All types of plants produce fruits when the days are shorter than nights. ()
- 53- When the rain falls in desert environment, some plants reach the flowering stage quickly. ()
- 54- Some desert plants have thick stems to store water. ()
- 55- Abiotic factors have important role in growth of living organisms. ()
- 56- Water and air are from biotic factors in an ecosystem. ()
- 57- Parents transfer different traits to their offspring that help them to survive. ()
- 58- Transferring of some properties from parents to offspring occurs in living organisms and nonliving things. ()
- 59- Inherited traits not affect the structure of living organisms. ()
- 60- All birman cats have white, very short and silky hair. ()
- 61- Your health will be positively affected, if you drink unclean water. ()
- 62- The soil represents the thin layer that covers the Earth's crust. ()
- 63- Healthy soil is very important to keep the life on Earth. ()
- 64- There is only one type of soil on Earth. ()
- 65- The main component of soil is the organic materials only. ()
- 66- The amount of organic materials affects the type of soil. ()
- 67- Wind and water help in the formation of soil. ()
- 68- All types of soil are similar in color and texture. ()
- 69- All components of the soil can be seen by naked eye. ()
- 70- Running water is the only factor that breaks down rocks causing soil erosion. ()
- 71- The difference between sand soil and clay soil is in the color only. ()

- 72- According to the size of particles in the soil, clay is the biggest particles, while sand is the smallest particles. ()
- 73- All soils retain the same amount of water. ()
- 74- Water flows through sand soil faster than in clay soil. ()
- 75- By increasing the amount of pore spaces between the particles of soil, it can retain more amount of water. ()
- 76- All living organisms depend on soil to get their needs. ()
- 77- The climate affects the types of plants that can grow in an area. ()
- 78- Humid areas retain large amount of water during rainfall. ()
- 79- Grassland ecosystem supports large herbivorous like gazelles with food. ()
- 80- Large trees can grow in dry sand soils. ()
- 81- Bog ecosystem has very hot temperature. ()
- 82- The crops need healthy soil to grow. ()
- 83- Adding animal manure helps to return back nutrients into the soil. ()
- 84- Converting fertile agricultural lands into cities leads to increase the deforestation of the land. ()
- 85- The soil can't be restored again. ()
- 86- Removing plants leads to the soil erosion. ()
- 87- Habitat destruction may happen due to natural changes only. ()
- 88- Some natural changes can benefit the soil. ()
- 89- Climate change is one of results of human activities. ()
- 90- Overpopulation causes the increase of food for all animals that live in a habitat. ()
- 91- The growth of human population makes many changes in a habitat. ()
- 92- Using great amounts of fertilizers reduce water pollution. ()
- 93- Controlling air pollution doesn't help in decreasing water pollution. ()
- 94- Cleaning up water from pollution is more effective than preventing it. ()
- 95- To prevent water pollution, laws must be applied. ()
- 96- To build traditional bricks, we need a lot of energy. ()
- 97- Bricks must be burned at 100°C. ()
- 98- The subsoil which is used for agriculture is used to make the glue like building material. ()

Correct the underlined words:

- 1- In the water cycle, the step that follows condensation process is runoff. (.....)
- 2- Falling of hail in coolest regions is an example of evaporation process. (.....)
- 3- The amount of thermal energy that reaches the Earth affects the rate of condensation process in the water cycle. (.....)
- 4- Clouds are formed due to melting process. (.....)
- 5- Magnetism is the force which causes moving down of water from higher places to lower places on the Earth. (.....)
- 6- The air which is found in the atmosphere heats up by the help of the moon. (.....)
- 7- The density of cold dry air is equal to that of hot humid air.(.....)
- 8- The heat of the Sun transfers through space to Earth's atmosphere by convection. (.....)
- 9- Due to radiation currents, warm water moves above cold water. (.....)
- 10- Deserts are formed by the effect of moist air. (.....)
- 11- The amount of rain that falls on deserts is equal to that which falls in other biomes. (.....)
- 12- The form of energy that flows from a hot object to a cold object is called sound energy. (.....)
- 13- The sand absorbs heat slower than water during daytime.(.....)
- 14- When air is heated, it expands as its molecules move close to each other. (.....)
- 15- Hydrologist is a scientist who studies the atmosphere to understand Earth's weather. (.....)
- 16- Flooding is the shortage of water that is available for drinking, growing crops and farming. (.....)
- 17- Sandstorms blow up from a dry area such as oceans. (.....)
- 18- Dust storms increase the water quality in irrigation canals.(.....)
- 19- Floods result in formation of dry lands. (.....)
- 20- Both of the Mediterranean Sea and the Nile River are two important stopovers in Egypt for migratory birds. (.....)
- 21- Egypt is an important stopover for migratory birds as it has very cold winter climate. (.....)

- 22- Some desert plants have thick leaves to store fats. (.....)
- 23- Most of animals which live in arctic environment have dark and thin fur. (.....)
- 24- Antarctica is a hot desert biome. (.....)
- 25- Biotic factors of an ecosystem include sunlight, air and water.(.....)
- 26- Availability of water is a genetic factor that affects the growth of trees and shrubs in an ecosystem. (.....)
- 27- The intensity of light means the amount of time that a plant is exposed to light. (.....)
- 28- Around each eye of emperor penguin, there is a circle of skin that doesn't have any feathers. (.....)
- 29- All living organisms inherited traits from their offsprings.(.....)
- 30- Birman cat doesn't have any hair or have only very fine hair.(.....)
- 31- Mitochondria carry inherited traits from parents to their offspring. (.....)
- 32- Sphynx cat doesn't have the genetic factor for very long ear trait which is found in Birman cat. (.....)
- 33- The way of your earlobes hang and the length of your fingers are two environmental factors. (.....)
- 34- Minerals are the building blocks of humus. (.....)
- 35- The soil is formed due to breaking down of rocks during melting process. (.....)
- 36- The size of sand particles is smaller than silt and clay particles.(.....)
- 37- The silt soil retains very small amount of water between their particles. (.....)
- 38- The color of sand soil is black. (.....)
- 39- The color of sand soil is gray. (.....)
- 40- The soil that keeps its organic materials becomes unsuitable for planting. (.....)
- 41- Dry soil contains very little air for roots to grow. (.....)
- 42- Savannas are wetland ecosystems. (.....)
- 43- Herbivores like lions can live in Savannas ecosystem which has grasses and small plants. (.....)
- 44- Overuse of pesticides is a way of soil restoration. (.....)
- 45- Desertification is a process by which land becomes more fertile. (.....)

- 46- When the soil is irrigated regularly, the quality of the crops will decrease. (.....)
- 47- Building houses and change natural spaces into factories are from natural changes that destroy the habitat. (.....)
- 48- In the Red Sea, Lionfish is considered as native species. (.....)
- 49- Scientists use the topsoil for making glue-like substance used as a building substance. (.....)

Choose from column (B) what suits it in column (A):

1)

Column A	Column B
1) Condensation	a) Falling of snow in an area.
2) Evaporation	b) Formation of fog on a road.
3) Precipitation	c) It is the step in which rainwater falling on the Earth's surface is collected in different water bodies.
4) Runoff	d) Drying of a shallow lake.
5) Collection	e) It is the step that follows precipitation process in the water cycle.

1	2	3	4	5
.....

2)

Column A	Column B
1) Water vapor releases energy when it.....	a) Solar radiation
2) Water can be pulled downward by force.	b) Precipitation
3) The process in which water falls on Earth in the form of rain, snow or sleet.	c) Wind.
4) The main factor in determining weather and climate.	d) condenses
5) It is caused by the continuous exchange between warm air and cold air.	e) gravity

1	2	3	4	5
.....

3)

Column A	Column B
1) Barometer	a) A device used to measure the amount of rain.
2) Weather radar	b) A device used to measure atmospheric pressure.
3) Anemometer	c) A device used to measure temperature.
4) Rain gauge	d) A device used to measure the intensity of precipitation.
5) Thermometer	e) A device used to measure the wind speed.

1	2	3	4	5
.....

4)

Column A	Column B
1) African penguin.	a) It has thick white fur.
2) Poison dart frog.	b) It lives in coast of South Africa.
3) Acacia tree.	c) It has long and silky hair.
4) Arctic fox.	d) It lives in tropical rain forest.
5) Birman cat.	e) It lives in desert.

1	2	3	4	5
.....

5)

Column A	Column B
1) Humus	a) They are dry grassland ecosystems.
2) Decomposers	b) It is a process that helps in the formation of the soil.
3) Erosion	c) They are the most common animals that live in bogs.
4) Savannas	d) It is from the organic components of the soil.
5) Mosquitos and frogs	e) They help in recycling the nutrients from dead organisms back into the soil.

1	2	3	4	5
.....

Cross out the odd words:

- 1) Weathering – Evaporation – Condensation – Precipitation.
- 2) Rain – Hail – Mountain – Snow.
- 3) Evaporation – Condensation – Transpiration – Melting.
- 4) Animals – Insects – Light – Grasses.
- 5) Sunlight – Air – water – Animals.
- 6) Hair length – Leaves shape - Fur color – Size of habitat.
- 7) Eye color – Lack of health care – Ears shape – shape of nose.
- 8) Worms – Water – Minerals – Air.
- 9) Bacteria - Remains of dead plants – Rocks – Insects.
- 10) Drought – Deforestation – Overgrazing – Overuse of pesticides.
- 11) Water pollution – Overuse of pesticides – Overgrazing – Overuse of fertilizers.
- 12) Hurricanes – Volcanic eruptions – Remove forests to build houses – Forests fires.
- 13) Floods – Building houses – Making road – Making airport runways.

Give reasons for:

- 1) Formation of fog in the early morning.
(Formation of clouds in the sky.)
➤
- 2) Changing of water from one state to another.
➤
- 3) Moving down of glaciers from the top of a mountain.
➤
- 4) Drying up of the large salt lake in Turkey in summer season.
➤
- 5) Changing of some amount of water in watery bodies into water vapor.
➤

6) About 10 % of water vapor in air comes from plant.

➤

7) The weather in the area near the equator is hot.

➤

8) The effect of heat is low in the area at the north and south of the equator.

➤

9) Hot air moves upward above cold air.

➤

10) On adding warm water to cold water without shaking, the warm water stay above cold water without mixing.

➤

11) Desert farming faces many difficulties.

➤

12) At noon, we may not be able to stand barefoot on the sand of a beach in summer, but we can swim in the sea water.

➤

13) When air is heated, it expands.

➤

14) Extreme weather became more stronger in many places around the world.

➤

15) Floods have some benefits.

➤

16) Sandstorms have harmful effects on human health.

➤

17) Falcons and eagles migrate to Egypt in winter.

➤

18) Birds migrate from one place to another.

➤

19) African penguin has a circle of skin that doesn't have any feather around each of its eyes.

➤

20) Poison dart frog has colorful poisonous Skin.

➤

21) Lizard body is covered with sandy-colored scales.

➤

22) Most of desert plants have short extended roots near the Earth's surface.

➤

23) Some plants which live in desert environment have long roots.

➤

24) Some plants in deserts produce seeds that can live for a long time.

➤

25) A birman kitten has a long and silky hair.

➤

26) Sphynx cat doesn't have long hair.

➤

27) Small dorcas gazelle is similar to its parents.

➤

28) Your lifestyle choices affect your health.

➤

29) Soil is very important for plants.

➤

30) Decomposers have an important role in the formation of soil.

➤

31) There are many types of soil.

➤

32) Water can flow very fast through sand soil.

➤

33) The soil that retains medium amount of water is more fertile.

➤

34) Clay soil can retain more amounts of water and air.

➤

35) The soil in a bog ecosystem is wet most of time.

➤

36) Large trees can't grow in savanna grassland ecosystems.

➤

37) The increase in the inclination of Earth's surface causes the erosion of the soil.

➤

38) Scientists should use crop remains like straw and stem in the soil. .

➤

39) Desertification process increases recently..

➤

40) We should keep green areas and reduce the amount of fertilizers.

➤

41) Soil scientists and engineers hope to stop using traditional bricks and concrete in building houses.

➤

What happens :

1) To the snow when sunlight falls on it.

➤

2) If Water of seas and oceans gains big amount of thermal energy.

➤

3) To the weather If the sun rays fall very Inclined on an area.

➤

4) To The level of water in a lake when the rate of evaporation increases.

➤

5) You cover some leaves in a plant with a plastic bag then put this plant in the direct sunlight for a while.

➤

6) If moist air touches a cold bottle of water.

➤

7) If water vapor in air condenses in the sky.

➤

8) If the water droplets in the clouds become very heavy.

➤

9) To the density of air if the cold air is warmed.

➤

10) To the movement of air when solar radiation heats up the air.

➤

11) To the air temperature if there is no wind on Earth.

➤

12) To the atmospheric pressure, as we move up toward the top of a mountain.

➤

13) To air density, as we move down toward the bottom of a mountain 4

➤

14) To the temperature of water inside a beaker if we put it under a lighted lamp for few minutes.

➤

15) To the temperature of desert sand at night.

➤

16) If we boil water in a pot on the stove. (Concerning the movement of hot water and cold water).

➤

17) To solar panels when dust accumulates on them.

➤

18) If the environmental conditions change in the homeland in which some migratory Birds live.

➤

19) To the living organisms in an ecosystem, if water and light are not available.

➤

20) To the plants in an ecosystem, if they receive too intense light.

➤

21) Two similar plants, if they are exposed to the same intensity and duration of light.

➤

22) If the genetic factor of hairless body trait is transferred from sphynx cats parents to their offspring.

➤

23) To the soil if it does not contain any decomposers.

➤

24) To the soil if the temperature in the environment increases.

➤

25) To the soil if it has large amount of pore spaces.

➤

26) If the soil holds medium amount of water.

➤

27) To the soil when there is much water in a wet region.

➤

28) To the soil when fertile agricultural lands are converted into factories or pastures.

➤

29) To the soil when farmers increase the planted area.

➤

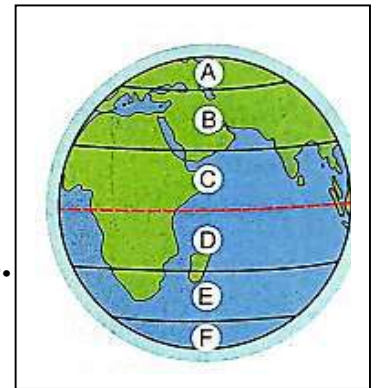
30) To the habitat when the number of predators decreases.

➤

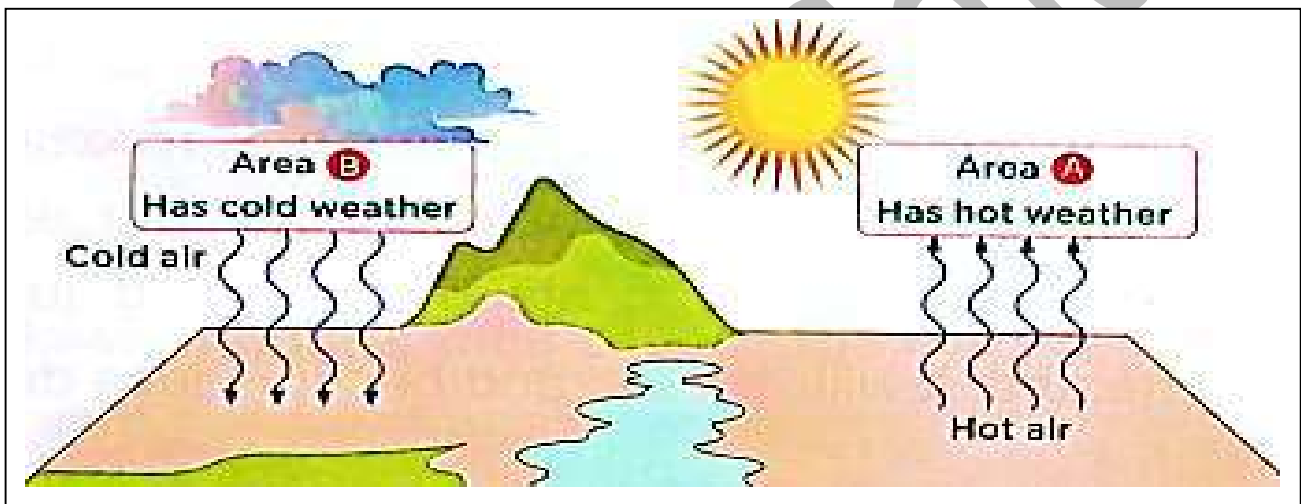
Answer the following questions:

1) Look at the following figure, then complete:

- Areas (.....) and (.....) are considered as hottest areas.
- Areas (.....) and (....) are considered as moderate areas.
- Areas (.....) and (.....) are considered as coolest areas.

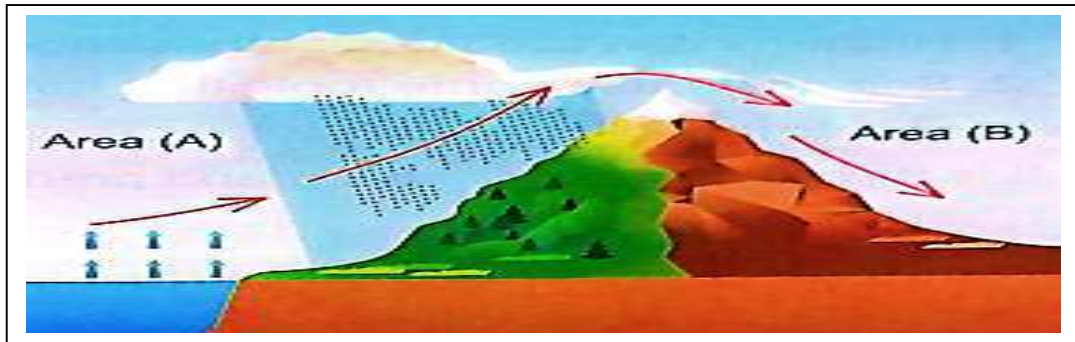


2) Look at the following figure, then complete:

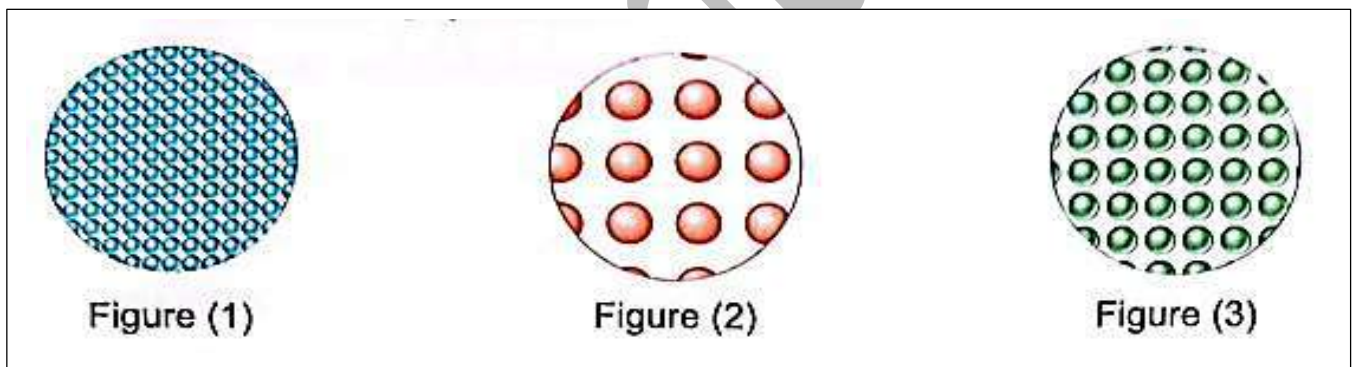


- Air in area (A) moves upward, because it has..... density.
- Air in area (A) becomes hot by the effect of.....
- Air in area (B) moves downward, because it hasdensity.
- When air in area (A) moves to area (B), itthermal energy, so it will fall down near the Earth's surface.

3) Look at the following figure, then complete:



- Area (A) represents theside of the mountain, while area (B) represents theside of the mountain.
 - Condensation of air and precipitation occurs in area (.....).
 - The rain shadow phenomenon occurs in area (.....).
- 4) Look at the opposite figure, then answer the questions:



- Figure (1) represents thesoil that hascolor.
- Figure (2) represents thesoil that haspore spaces.
- Figure (3) represents thesoil that retain..... amount of water.
- Soil in figure (.....) allows very large amount of water to flow through its particles.

G6 Final Revision (answered)

Choose the correct answer:

- 1- All the following are considered as the main processes in transferring water through water reservoirs, except.....
a) condensation b) evaporation c) collection d) precipitation
- 2- In winter, rain falls due to process.
a) condensation b) evaporation c) collection d) precipitation
- 3- When water runs through a river then into a sea, this step is called.....
a) runoff. b) condensation. c) precipitation. d) evaporation.
- 4- Gathering the water of rains to form streams or rivers is called
a) precipitation. b) evaporation. c) collection. d) condensation.
- 5- The Sun heats the water of seas and this leads to occurrence of process.
a) freezing b) melting c) evaporation d) condensation
- 6- The form of water that is found in air and we can't see it is the
a) liquid water. b) water vapor. c) Ice. d) snow.
- 7- The condensed water vapor in clouds returns back to the Earth's surface in the form of all the following, except.....
a) water vapor. b) rain. c) snow. d) sleet.
- 8- Leakage of water into groundwater reservoirs is due to the action of.....
a) condensation. b) gravity. c) precipitation. d) evaporation.
- 9- Both of..... and processes happen due to the decrease of thermal energy.
a) Melting – freezing b) melting – condensation
c) freezing – condensation d) melting – evaporation
- 10- The weather of the areas near the equator is
a) hot and humid. b) hot and snowy.
c) warm and humid. d) warm and snowy.
- 11- Moderate regions are areas in which the evaporation process is.....
a) the greatest. b) the smallest. c) moderate. d) absent.

- 12- When the sun rays fall semi-inclined on Earth's surface, it is distributed on a large area giving effect of heat and the weather becomes.....
a) high – warm. b) low – warm. c) high – cold. d) low – cold.
- 13- Water vapor in the atmosphere can condense and form.....
a) air. b) clouds. c) sunlight. d) wind.
- 14- The form of evaporation process that takes place from the leaves of plants is called
a) transpiration. b) collection. c) melting. d) freezing.
- 15- When a liquid is heated, it will and become less dense and
a) expand — heavier. b) contract — lighter.
c) expand - lighter. d) contract — heavier.
- 16- Due to the very little rains which precipitate in some areas on Earth, large areas of are formed.
a) forests b) seas c) oceans d) deserts
- 17- Convection currents in the atmosphere are controlled by
a) precipitation. b) moon's rotation.
c) the energy from the Sun. d) Earth's rotation.
- 18- Convection is a way of transferring of heat in liquids and gases due to the difference in and
a) mass – color. b) shape – volume.
c) temperature – density. d) color – temperature.
- 19- Wind is produced by the help of
a) water turbine. b) electric generator.
c) solar radiation. d) electric motor.
- 20- Wind is formed when rises and replaced by that flows from nearby areas.
a) warm air – cold air b) warm water – cold water
c) cold air – warm air d) cold water – warm water
- 21- When air is heated, its changes.
a) mass b) smell c) color d) density

- 22- Heat is transferred through the atmosphere by
 a) convection. b) conduction. c) reflection. d) absorption.
- 23- Desert farming depends on the maximum use of....., as its quantity is very small.
 a) sand b) sunlight c) water d) winds
- 24- A rain shadow is an area that is formed behind a
 a) tree. b) mountain. c) building. d) bridge.
- 25- If the temperature at the bottom of a mountain is 15 °C, this means it may reach.....°C at the top of this mountain.
 a) 30 b) 25 c) 20 d) 2
- 26- If the temperature of the sand in a desert is 50 °C at noon, its temperature may reach°C at night.
 a) 20 b) 60 c) 70 d) 80
- 27- Extreme weather conditions include all the following, except
 a) drought. b) flooding. c) sandstorms. d) sunrise.
- 28- Drought affects all the following, except
 a) people. b) plants. c) buildings. d) animals.
- 29- Floods may occur as a result of and
 a) gentle rain – melting of snow. b) heavy rain – melting of snow.
 c) gentle rain – freezing of water. d) heavy rain – evaporation of water.
- 30- Birds migrate to search for all of the following, except.....
 a) best conditions for reproduction. b) different food resources.
 c) another suitable habitat. d) another unsuitable climate.
- 31- Migratory birds may suffer from all of the following conditions during their journey, except.....
 a) many resting sites are available. b) presence of predators.
 c) shortage of food. d) shortage of water.
- 32- The Red Sea in Egypt includes all of the following environments, except..... environment.
 a) marine b) mountain c) rain forest d) coastal
- 33- All the following are biotic factors, except.....
 a) animals. b) insects. c) precipitation. d) grasses.

- 45- The soil provides the plant with all of the following, except.....
a) water. b) air. c) nutrients. d) sunlight.
- 46- From the main factors that cause the soil formation are.....and.....
a) erosion – evaporation. b) weathering – condensation.
c) erosion – weathering. d) melting – gravity.
- 47- The material rich in nutrients and produced from the decomposition of dead organisms is called.....
a) decomposers. b) humus. c) sand. d) water.
- 48- The organic materials which are found in the soil include.....
a) sand and remains of dead organisms. b) humus and silt.
c) remains of dead animals and plants. d) silt and clay.
- 49- Soil can be classified into..... different types according to its kind of particles.
a) two b) three c) four d) five
- 50- When the soil contains large amount of sand particles, the flow of water will.....
a) not change. b) increase. c) decrease. d) stop.
- 51-soil contains large amount of sand particles.
a) Sand b) Silt c) Clay d) Fertile
- 52- The soil that retains medium amount of water becomes.....
a) more fertile. b) less fertile. c) unsuitable for planting. d) very dry.
- 53- soil holds water well so, it becomes..... most of time.
a) Sand – wet b) Clay – wet c) Clay – dry d) Silt – dry
- 54- Overuse of..... are from the reasons of soil depletion.
a) water and air b) pesticides and chemical fertilizers
c) air and fertilizers d) water and pesticides
- 55-are from the ways of soil restoration.
a) Adding nutrients to the soil and deforestation
b) Overuse of pesticides and water pollution
c) Overgrazing and planting different types of crops
d) Adding nutrients to the soil and planting different types of crops

56-is a way to reduce the erosion of the soil.

- a) Removing plants
- b) Digging trenches
- c) Increasing the amount of water
- d) adding pesticides

57- The change in climate leads to the..... of some living organisms.

- a) increase
- b) extinction
- c) reproduction
- d) pollution

58-is from the invasive species that are found in the Red Sea.

- a) Penguin
- b) Frog
- c) Lionfish
- d) Lizard

59- Overpopulation leads to the decrease in all of the following, except.....

- a) food.
- b) water.
- c) shelter.
- d) habitat destruction

60- Treatment of sewage and reduce the amount of fertilizers help in.....

- a) increasing air pollution.
- b) increasing water pollution.
- c) increasing soil pollution.
- d) decreasing water pollution.

61- All the followings are from ways to decrease water pollution except.....

- a) treatment of sewage and industrial water.
- b) getting rid of trash in correct ways.
- c) increasing the industries which use water.
- d) using soil fences and sedimentation ponds.

62- Traditional bricks and concrete must be burned at..... temperature and produce..... amount of pollution.

- a) high – small.
- b) high – large.
- c) low – large.
- d) low – small.

Complete the following sentences:

- 1- Sun is the main source of energy which affects the water cycle.
- 2- When the water in clouds becomes too heavy, it falls on the ground by a process, called precipitation.
- 3- When water vapor in air hits a cold glass of juice, it will condense.
- 4- The two factors which control the movement of water in the water cycle are gravity force and solar energy.
- 5- The water starts to move or change its way of movement when a force affects it.
- 6- The large salt lake in Turkey is dried up due to the increase in the rate of evaporation process.

- 7- Flamingos migrate to the large salt lake in Turkey when the weather becomes warm and they are feed on algae which are found in this lake.
- 8- Increasing and decreasing of water level in some lakes is due to the transfer of energy through the water cycle.
- 9- About 10 % of the water vapor in air comes from transpiration of plants.
- 10- Transpiration is a form of evaporation that takes place through the stomata which are found in plant leaves.
- 11- Clouds consist of millions of tiny water droplets that have condensed out of the air.
- 12- When warm air contains enough water vapor, it loses this water in the form of rain.
- 13- Fresh water changes into water vapor when it gains thermal energy, while fresh water changes into ice when it loses thermal energy.
- 14- The distribution of solar energy on the Earth's surface plays an important role in evaporation process in the water cycle.
- 15- The weather becomes hot when the sun rays fall perpendicular on Earth's surface.
- 16- The weather of the area faraway from the equator is very cold because the sun rays fall very inclined on the Earth's surface at this area.
- 17- By increasing the temperature of air, its density decreases.
- 18- The difference in the temperature and densities in water of oceans and atmosphere occurs due to the unequal heating of land and oceans.
- 19- Due to convection, hot air moves upward above cold air.
- 20- Heat can transfer through the Earth's atmosphere due to the effect of convection currents.
- 21- Cold water has more density than warm water, so it moves under the warm water.
- 22- Unequal heating of the Earth between the poles and the equator generates wind.
- 23- When warm air is cooled, it will move downward, while cold air moves upward when it is warmed.
- 24- Heat transfers from the hot object to the cold object.

- 25- The amount of water that evaporates is more than the amount of rain that falls on deserts.
- 26- At the top of the mountain, the atmospheric pressure is lower compared to the bottom of the mountain.
- 27- As you climb to the top of a mountain, the air density will decrease, while as you move down toward the bottom of it, the air temperature will increase.
- 28- The side of coastal mountain ranges that faces the coast in which air moves up when hitting a mountain is the wet side, while the other side is the dry side.
- 29- When the hot and humid air meets the cold and dry air, the hot air rises.
- 30- Gases and liquids expand by heating and contract by cooling.
- 31- Sand cools down in a shorter time than sea water during nighttime.
- 32- The temperatures of both water and sand increases in the presence of a source of heat.
- 33- Sea water absorbs heat slowly and loses it slowly.
- 34- The measure of how much water vapor is present in the air is called humidity.
- 35- The horizontal movement of air is called wind, whereas the vertical movement of air is called air current.
- 36- To know whether it rained more this summer or last summer, the meteorologist should use rain gauge.
- 37- To know the possible path of a hurricane; the meteorologist should use weather radar.
- 38- Meteorologists use weather maps to collect and analyze data from different places and over short periods of time.
- 39- Extreme hot temperatures may cause drought, while heavy rain may cause flooding.
- 40- The adaptation that is related to the body structure of a living organism is known as structural adaptation.
- 41- Thorns on a plant stem are an example of structural adaptation, while growth of plant toward light is an example of behavioral adaptation.

- 42- Migration of animals to search for food is considered as a type of behavioral adaptation.
- 43- The thick fur of animals that live in cold areas is considered as a type of structural adaptation.
- 44- Ecosystem contains biotic factors and abiotic factors.
- 45- Abiotic factors include nonliving things in an ecosystem.
- 46- Light, air and water are basic needs for plants to grow.
- 47- Both of environmental factors and genetic factors affect the growth of living organisms.
- 48- Photosynthesis process is affected by some environmental factors such as availability of water and light.
- 49- The plant's growth is affected by intensity and duration of light
- 50- Chrysanthemum plant produces flowers when the days are shorter than the nights.
- 51- Hot deserts have a little amount of groundwater far below the ground surface.
- 52- Some plants like palms and acacia trees live in the desert environment in Egypt.
- 53- Some desert plants have thorns on their stems and branches to protect them from herbivores.
- 54- Some desert plants can store water in their leaves and stems.
- 55- The body size of animals and the length of plants are two genetic factors that affect their growth.
- 56- Emperor penguin lives in Antarctic and it has a thick fatty layer and its skin covered with dense feathers to keep its body warm.
- 57- African penguin has a circle of skin that doesn't have any feathers around each of its eyes.
- 58- Lizard has sandy-colored scales and lives in desert.
- 59- Appearance of inherited traits on offspring is due to passing down genetic factors from their parents.
- 60- Genes are responsible for determining the body feature, and present in the cell nucleus.

- 61- Birman cats have long, silky hair with different colors.
- 62- Sphynx cat doesn't have the genetic factor of long hair.
- 63- Color and place of the flower are two inherited traits in plants.
- 64- The soil is composed of organic and inorganic ingredients.
- 65- Soil is the shelter for many living organisms, such as worms, insects, fungi and bacteria.
- 66- Soil is composed of many inorganic ingredients as air, water, rocks and minerals.
- 67- The processes which play an important role in the soil formation are weathering, erosion and deposition.
- 68- Silt particles are larger than clay particles and smaller than sand particles.
- 69- Humus is a material that makes the soil fertile and produced from decomposition of organic material of dead organisms.
- 70- The remains of dead plants and animals are decomposed into chemical nutrients such as oxygen, nitrogen and carbon.
- 71- There are spaces between the particles of the soil called pore spaces and they are filled with air and water.
- 72- Decomposers play an important role in recycling the nutrients to the soil.
- 73- Sand, clay and silt particles are products of rocks weathering.
- 74- Silt soil contains medium particles and its color is gray.
- 75- The ability of silt soil to retain water is larger than sand soil.
- 76- Waterlogged soil contains large amount of water and little amount of air and this doesn't help roots to grow.
- 77- Savannas are grassland ecosystems that contain dry sand soil and are common in central Africa.
- 78- The type of soil that is found in bog ecosystems is clay soil.
- 79- Types of plants in the soil affect the temperature and weather of the ecosystem.
- 80- The moist conditions in bogs lead to very cool temperature and they are suitable for some plants to grow in them.

- 81- Deforestation, drought or overgrazing cause the increase of the infertility of the land and desertification.
- 82- Increasing the inclination of the Earth's surface increases the erosion process of the soil.
- 83- To reduce the soil erosion process green areas should be increased.
- 84- Adding sand and silt to the soil helps in decreasing the effect of moving water over the soil.
- 85- All habitats provide the living organisms with food, water, shelter and space.
- 86- Habitat destruction could happen due to natural changes and human activities.
- 87- Human activities like pollution and waste produced by humans led to increase in the percentage of carbon dioxide gas and increase in the Earth's temperature.
- 88- Streams, deserts and oceans are examples of natural habitats.
- 89- Hurricanes, forests fires and volcanic eruptions are from the natural changes that destroy habitats.
- 90- Using soil fences and sedimentation ponds help in reducing water pollution.
- 91- Soil scientists hope to stop using traditional bricks and concrete which are used in building houses.
- 92- To produce traditional bricks, a lot of energy is required and a lot of pollution is produced.
- 93- The glue-like substance which is used in binding materials together is formed from the chemical change of the subsoil.

Write the scientific term:

- | | |
|--|--------------------|
| 1- The movement of water through different water reservoirs on the Earth. | (water cycle) |
| 2- They are the places of storing water on the Earth. | (water reservoirs) |
| 3- It is the process in which matter changes from liquid state to gas state. | (Evaporation) |

- 4- It is the process in which matter changes from gas state to liquid state. (Condensation)
- 5- Large areas of land which are formed due to the effect of dry air (Deserts)
- 6- It is the method by which heat transfers within liquids and gases, where hot molecules rise upward, while colder molecules fall down.(Convection)
- 7- It is caused when air warmed by the solar radiation rises and then replaced by cooler air that flows from nearby areas. (Wind)
- 8- It is the main source which is responsible for warming of air and forming wind. (Sun)
- 9- A side of mountain ranges at coastal regions in which the rain shadow phenomenon occurs. (Dry side)
- 10- The science that studies the weather conditions. (Meteorology)
- 11- It is the weight of the air above an area. (atmospheric pressure)
- 12- It is a natural phenomenon that occurs when the level of water in a river increases until it overflows its banks. (Flooding)
- 13- A phenomenon in which very strong winds blow up dust that reduces the visibility during driving cars. (Dust storm)
- 14- A process through which the living organism be able to live and survive in its environment. (Adaptation)
- 15- It is a change in the behaviors or acts of a living organism to help them to survive. (Behavioral adaptation)
- 16- It is a type of behavioral adaptation in which animals move in a certain season from one place to another. (Migration)
- 17- It contains biotic factors and abiotic factors that interact with each other. (Ecosystem)
- 18- The factors that include living organisms in an ecosystem. (Biotic factors)
- 19- They are tiny structures that found in the cell nucleus. (Genes)
- 20- It is the factor that controls which traits get inherited from parents to their offspring. (Genetic factors)
- 21- They are external factors that affect our health and we might not able to control them. (Environmental factors)
- 22- The loose layer that covers Earth's surface. (Soil)
- 23- A type of soil that allows water to flow slow as it has small pore spaces between its particles. (Clay soil)
- 24- The dark (black) soil that can retain large amount of water. (Clay soil)

- 25-** A type of soil that retains medium amount of water and has medium pore spaces between its particles. (Silt soil)
- 26-** The distances between the particles of the soil. (Pore spaces)
- 27-** A type of soil that is dry and loose, so large trees can't grow in it. (Sand soil)
- 28-** The place where living organisms live. (Habitat)

Put (√) or (x):

- 1-** Water reservoirs on the Earth include oceans and seas only. (x)
- 2-** Precipitation occurs after condensation of water vapor in the sky. (√)
- 3-** Rains fall and collect in oceans by the effect of gravity force. (√)
- 4-** States of water change when water gains or loses energy. (√)
- 5-** When fresh water changes into snow and ice, this means that fresh water gains thermal energy. (x)
- 6-** Melting and transpiration processes only occur by cooling. (x)
- 7-** When water vapor cools in the sky, it forms clouds. (√)
- 8-** Flamingos migrate to the large salt lake in Turkey when the weather is very cold there. (x)
- 9-** All places on Earth receive the same amount of sunlight. (x)
- 10-** Hottest regions are regions in which the evaporation process is the greatest. (√)
- 11-** The weather becomes cold when the sun rays fall semi-inclined on Earth's surface. (x)
- 12-** As a result of low temperature, water returns back into water vapor. (x)
- 13-** Convection causes the movement of low density air above the high density air. (√)
- 14-** Convection currents in Earth's atmosphere help in determining the regional climate. (√)
- 15-** When convection occurs in the atmosphere cold air rises up and warm air falls down. (x)
- 16-** The direction of wind is determined by the amount of solar radiation received by the Earth. (√)

- 17- The rain never falls on deserts. (x)
- 18- People in desert areas face a lot of challenges in desert farming. (✓)
- 19- Solar energy and wind turbines can be used to operate desert farms. (✓)
- 20- The amount of precipitation is large in deserts. (x)
- 21- Reusing water is a useful way to irrigate crops in desert farms. (✓)
- 22- The properties of the atmosphere at the top of the mountain and at its bottom are similar. (x)
- 23- A wet side of a coastal mountain range is away from the coast. (x)
- 24- The air becomes more dense at the top of the mountain compared to the bottom of the mountain. (x)
- 25- The temperatures of both water and sand increase at the same rate when they are exposed to the same amount of heat. (x)
- 26- Land heats up quickly and cools down slowly compared to that of water. (x)
- 27- Scientists use some tools that help them in predicting weather conditions. (✓)
- 28- Mapping data allows meteorologists to represent data about weather conditions. (✓)
- 29- When rain doesn't fall, soil may dry and plants may die. (✓)
- 30- Although flooding is harmful, it also has some benefits. (✓)
- 31- Floods may cause death of people and animals. (✓)
- 32- Sandstorms decrease the visibility during driving cars. (✓)
- 33- Dust storms have harmful effects on the plane engines. (✓)
- 34- Animals migrate from one place to another seasonally. (✓)
- 35- Migratory birds are affected by environmental factors during their migration. (✓)
- 36- Birds migrate to search for different food sources. (✓)
- 37- Animals need food, water and habitat to survive. (✓)
- 38- The growth of living organisms is not affected by environmental factors around them. (x)
- 39- In our world there are different kinds of environments. (✓)
- 40- Different types of environments have different types of plants and animals. (✓)
- 41- An area between buildings that contains grasses, insects and weeds represents a large ecosystem. (x)

- 42- Ecosystems include living organisms only. (x)
- 43- Abiotic factors of an ecosystem can eat, breathe and grow. (x)
- 44- In the arctic ecosystem, caribou feeds on wolves. (x)
- 45- It is easy for animals to live in the desert environments. (x)
- 46- Deserts may be hot areas or cold areas. (✓)
- 47- Dorcas gazelle can live in both desert area and semi-desert area. (✓)
- 48- The skin of poison dart frog cannot protect it from predators. (x)
- 49- Abiotic factors affect the growth and the adaptation of biotic factors. (✓)
- 50- The length of plants is from genetic factors which affects their growth. (✓)
- 51- The plant's growth is not affected by intensity of light. (x)
- 52- All types of plants produce fruits when the days are shorter than nights. (x)
- 53- When the rain falls in desert environment, some plants reach the flowering stage quickly. (✓)
- 54- Some desert plants have thick stems to store water. (✓)
- 55- Abiotic factors have important role in growth of living organisms. (✓)
- 56- Water and air are from biotic factors in an ecosystem. (x)
- 57- Parents transfer different traits to their offspring that help them to survive. (✓)
- 58- Transferring of some properties from parents to offspring occurs in living organisms and nonliving things. (x)
- 59- Inherited traits not affect the structure of living organisms. (x)
- 60- All birman cats have white, very short and silky hair. (x)
- 61- Your health will be positively affected, if you drink unclean water. (x)
- 62- The soil represents the thin layer that covers the Earth's crust. (✓)
- 63- Healthy soil is very important to keep the life on Earth. (✓)
- 64- There is only one type of soil on Earth. (x)
- 65- The main component of soil is the organic materials only. (x)
- 66- The amount of organic materials affects the type of soil. (✓)
- 67- Wind and water help in the formation of soil. (✓)
- 68- All types of soil are similar in color and texture. (x)
- 69- All components of the soil can be seen by naked eye. (x)
- 70- Running water is the only factor that breaks down rocks causing soil erosion. (x)
- 71- The difference between sand soil and clay soil is in the color only. (x)

- 72- According to the size of particles in the soil, clay is the biggest particles, while sand is the smallest particles. (x)
- 73- All soils retain the same amount of water. (x)
- 74- Water flows through sand soil faster than in clay soil. (✓)
- 75- By increasing the amount of pore spaces between the particles of soil, it can retain more amount of water. (x)
- 76- All living organisms depend on soil to get their needs. (✓)
- 77- The climate affects the types of plants that can grow in an area. (✓)
- 78- Humid areas retain large amount of water during rainfall. (✓)
- 79- Grassland ecosystem supports large herbivorous like gazelles with food. (✓)
- 80- Large trees can grow in dry sand soils. (x)
- 81- Bog ecosystem has very hot temperature. (x)
- 82- The crops need healthy soil to grow. (✓)
- 83- Adding animal manure helps to return back nutrients into the soil. (✓)
- 84- Converting fertile agricultural lands into cities leads to increase the deforestation of the land. (✓)
- 85- The soil can't be restored again. (x)
- 86- Removing plants leads to the soil erosion. (✓)
- 87- Habitat destruction may happen due to natural changes only. (x)
- 88- Some natural changes can benefit the soil. (✓)
- 89- Climate change is one of results of human activities. (✓)
- 90- Overpopulation causes the increase of food for all animals that live in a habitat. (x)
- 91- The growth of human population makes many changes in a habitat. (✓)
- 92- Using great amounts of fertilizers reduce water pollution. (x)
- 93- Controlling air pollution doesn't help in decreasing water pollution. (x)
- 94- Cleaning up water from pollution is more effective than preventing it. (x)
- 95- To prevent water pollution, laws must be applied. (✓)
- 96- To build traditional bricks, we need a lot of energy. (✓)
- 97- Bricks must be burned at 100°C. (x)
- 98- The subsoil which is used for agriculture is used to make the glue like building material. (x)

Correct the underlined words:

- 1- In the water cycle, the step that follows condensation process is runoff. (precipitation)
- 2- Falling of hail in coolest regions is an example of evaporation process. (precipitation)
- 3- The amount of thermal energy that reaches the Earth affects the rate of condensation process in the water cycle. (evaporation)
- 4- Clouds are formed due to melting process. (condensation)
- 5- Magnetism is the force which causes moving down of water from higher places to lower places on the Earth. (Gravity)
- 6- The air which is found in the atmosphere heats up by the help of the moon. (Sun)
- 7- The density of cold dry air is equal to that of hot humid air. (more than)
- 8- The heat of the Sun transfers through space to Earth's atmosphere by convection. (radiation)
- 9- Due to radiation currents, warm water moves above cold water. (convection)
- 10- Deserts are formed by the effect of moist air. (dry)
- 11- The amount of rain that falls on deserts is equal to that which falls in other biomes. (less than)
- 12- The form of energy that flows from a hot object to a cold object is called sound energy. (thermal)
- 13- The sand absorbs heat slower than water during daytime. (faster)
- 14- When air is heated, it expands as its molecules move close to each other. (away from)
- 15- Hydrologist is a scientist who studies the atmosphere to understand Earth's weather. (Meteorologist)
- 16- Flooding is the shortage of water that is available for drinking, growing crops and farming. (Drought)
- 17- Sandstorms blow up from a dry area such as oceans. (deserts)
- 18- Dust storms increase the water quality in irrigation canals. (decrease)
- 19- Floods result in formation of dry lands. (wet)
- 20- Both of the Mediterranean Sea and the Nile River are two important stopovers in Egypt for migratory birds. (Red)
- 21- Egypt is an important stopover for migratory birds as it has very cold winter climate. (moderate)

- 22- Some desert plants have thick leaves to store fats. (water)
- 23- Most of animals which live in arctic environment have dark and thin fur. (white and thick)
- 24- Antarctica is a hot desert biome. (cold)
- 25- Biotic factors of an ecosystem include sunlight, air and water. (Abiotic)
- 26- Availability of water is a genetic factor that affects the growth of trees and shrubs in an ecosystem. (an environmental)
- 27- The intensity of light means the amount of time that a plant is exposed to light. (duration)
- 28- Around each eye of emperor penguin, there is a circle of skin that doesn't have any feathers. (African penguin)
- 29- All living organisms inherited traits from their offsprings. (parents)
- 30- Birman cat doesn't have any hair or have only very fine hair. (Sphynx)
- 31- Mitochondria carry inherited traits from parents to their offspring. (Genes)
- 32- Sphynx cat doesn't have the genetic factor for very long ear trait which is found in Birman cat. (hair)
- 33- The way of your earlobes hang and the length of your fingers are two environmental factors. (genetic)
- 34- Minerals are the building blocks of humus. (rocks)
- 35- The soil is formed due to breaking down of rocks during melting process. (weathering)
- 36- The size of sand particles is smaller than silt and clay particles.(larger)
- 37- The silt soil retains very small amount of water between their particles. (sand)
- 38- The color of sand soil is black. (clay)
- 39- The color of sand soil is gray. (yellow)
- 40- The soil that keeps its organic materials becomes unsuitable for planting. (more fertile)
- 41- Dry soil contains very little air for roots to grow. (Waterlogged)
- 42- Savannas are wetland ecosystems. (dry grassland)
- 43- Herbivores like lions can live in Savannas ecosystem which has grasses and small plants. (gazelles)
- 44- Overuse of pesticides is a way of soil restoration. (depletion)
- 45- Desertification is a process by which land becomes more fertile. (infertile)

- 46- When the soil is irrigated regularly, the quality of the crops will decrease. (increase)
- 47- Building houses and change natural spaces into factories are from natural changes that destroy the habitat. (human activities)
- 48- In the Red Sea, Lionfish is considered as native species. (invasive)
- 49- Scientists use the topsoil for making glue-like substance used as a building substance. (subsoil)

Choose from column (B) what suits it in column (A):

1)

Column A	Column B
1) Condensation	a) Falling of snow in an area.
2) Evaporation	b) Formation of fog on a road.
3) Precipitation	c) It is the step in which rainwater falling on the Earth's surface is collected in different water bodies.
4) Runoff	d) Drying of a shallow lake.
5) Collection	e) It is the step that follows precipitation process in the water cycle.

1	2	3	4	5
b	d	a	e	c

2)

Column A	Column B
1) Water vapor releases energy when it.....	a) Solar radiation
2) Water can be pulled downward by force.	b) Precipitation
3) The process in which water falls on Earth in the form of rain, snow or sleet.	c) Wind.
4) The main factor in determining weather and climate.	d) condenses
5) It is caused by the continuous exchange between warm air and cold air.	e) gravity

1	2	3	4	5
d	e	b	a	c

3)

Column A	Column B
1) Barometer	a) A device used to measure the amount of rain.
2) Weather radar	b) A device used to measure atmospheric pressure.
3) Anemometer	c) A device used to measure temperature.
4) Rain gauge	d) A device used to measure the intensity of precipitation.
5) Thermometer	e) A device used to measure the wind speed.

1	2	3	4	5
b	d	e	a	c

4)

Column A	Column B
1) African penguin.	a) It has thick white fur.
2) Poison dart frog.	b) It lives in coast of South Africa.
3) Acacia tree.	c) It has long and silky hair.
4) Arctic fox.	d) It lives in tropical rain forest.
5) Birman cat.	e) It lives in desert.

1	2	3	4	5
b	d	e	a	c

5)

Column A	Column B
1) Humus	a) They are dry grassland ecosystems.
2) Decomposers	b) It is a process that helps in the formation of the soil.
3) Erosion	c) They are the most common animals that live in bogs.
4) Savannas	d) It is from the organic components of the soil.
5) Mosquitos and frogs	e) They help in recycling the nutrients from dead organisms back into the soil.

1	2	3	4	5
d	e	b	a	c

Cross out the odd words:

- 1) Weathering – Evaporation – Condensation – Precipitation.
- 2) Rain – Hail – Mountain – Snow.
- 3) Evaporation – Condensation – Transpiration – Melting.
- 4) Animals – Insects – Light – Grasses.
- 5) Sunlight – Air – water – Animals.
- 6) Hair length – Leaves shape - Fur color – Size of habitat.
- 7) Eye color – Lack of health care – Ears shape – shape of nose.
- 8) Worms – Water – Minerals – Air.
- 9) Bacteria - Remains of dead plants – Rocks – Insects.
- 10) Drought – Deforestation – Overgrazing – Overuse of pesticides.
- 11) Water pollution – Overuse of pesticides – Overgrazing – Overuse of fertilizers.
- 12) Hurricanes – Volcanic eruptions – Remove forests to build houses – Forests fires.
- 13) Floods – Building houses – Making road – Making airport runways.

Give reasons for:

- 1) Formation of fog in the early morning.
(Formation of clouds in the sky.)
 - Due to condensation of water vapor.
- 2) Changing of water from one state to another.
 - Due to gaining or losing of thermal energy.
- 3) Moving down of glaciers from the top of a mountain.
 - Due to the effect of gravity force.
- 4) Drying up of the large salt lake in Turkey in summer season.
 - Due to the increase in the evaporation of the lake water.
- 5) Changing of some amount of water in watery bodies into water vapor.
 - Due to evaporation process, as a result of gaining of thermal energy.

- 6) About 10 % of water vapor in air comes from plant.
 - Due to transpiration process.
- 7) The weather in the area near the equator is hot.
 - Because the sun rays fall perpendicular on these area giving high effect of heat.
- 8) The effect of heat is low in the area at the north and south of the equator.
 - Because the sun rays fall semi-inclined on these area.
- 9) Hot air moves upward above cold air.
 - Due to the effect of convection, where hot air has less density, while cold air has more density.
- 10) On adding warm water to cold water without shaking, the warm water stay above cold water without mixing.
 - Due to the effect of convection, where hot water has less density, while cold water has more density
- 11) Desert farming faces many difficulties.
 - Because the desert's climate is hot and the amount of water is little.
- 12) At noon, we may not be able to stand barefoot on the sand of a beach in summer, but we can swim in the sea water.
 - Because sand is heated up faster than water.
- 13) When air is heated, it expands.
 - Because the molecules of air move away from each other.
- 14) Extreme weather became more stronger in many places around the world.
 - Due to global climate change.
- 15) Floods have some benefits.
 - Because some ecosystems depend on floods such as ecosystems along the Nile.
- 16) Sandstorms have harmful effects on human health.
 - Because sandstorms harm the human eyes and respiratory system.
- 17) Falcons and eagles migrate to Egypt in winter.
 - Because Egypt in winter has a moderate climate.

- 18) Birds migrate from one place to another.**
➤ To search for the best conditions that help them reproduce.
- 19) African penguin has a circle of skin that doesn't have any feather around each of its eyes.**
➤ To help its body cool fast during hot weather.
- 20) Poison dart frog has colorful poisonous Skin.**
➤ To protect itself from predators.
- 21) Lizard body is covered with sandy-colored scales.**
➤ To hide among rocks in desert.
- 22) Most of desert plants have short extended roots near the Earth's surface.**
➤ To absorb any available water.
- 23) Some plants which live in desert environment have long roots.**
➤ To get the deep groundwater.
- 24) Some plants in deserts produce seeds that can live for a long time.**
➤ Due to shortage of rain fall.
- 25) A birman kitten has a long and silky hair.**
➤ Because it inherits this trait from its parents.
- 26) Sphynx cat doesn't have long hair.**
➤ Because it doesn't inherit the long hair trait from its parents.
- 27) Small dorcas gazelle is similar to its parents.**
➤ Because they get some genetic factors from their parents.
- 28) Your lifestyle choices affect your health.**
➤ Because it depends on your behavior which may be good or bad habits.
- 29) Soil is very important for plants.**
➤ Because soil provides the plant with air, water and nutrients.
- 30) Decomposers have an important role in the formation of soil.**
➤ Because decomposers recycle the remains of dead plants and animals into a chemical nutrients which are released into soil.
- 31) There are many types of soil.**
➤ Due to the different amounts of ingredient that form them.
- 32) Water can flow very fast through sand soil.**
➤ Because it has large particles and large amounts of pore spaces.

- 33) The soil that retains medium amount of water is more fertile.
➤ Because it keeps its organic materials.
- 34) Clay soil can retain more amounts of water and air.
➤ Because it has small particles and small amount of pore spaces.
- 35) The soil in a bog ecosystem is wet most of time.
➤ Because it is rich with clay particles that retain much water very well.
- 36) Large trees can't grow in savanna grassland ecosystems.
➤ Because it contains dry sand soil which is loose and drains water quickly.
- 37) The increase in the inclination of Earth's surface causes the erosion of the soil.
➤ Due to the increase in speed of moving water over Earth's surface.
- 38) Scientists should use crop remains like straw and stem in the soil. .
➤ To add nutrients to the soil and restore the soil.
- 39) Desertification process increases recently..
➤ Due to deforestation, drought and overgrazing.
- 40) We should keep green areas and reduce the amount of fertilizers.
➤ To reduce water pollution.
- 41) Soil scientists and engineers hope to stop using traditional bricks and concrete in building houses.
➤ Because they need a lot of energy and produce a lot of pollution.

What happens :

- 1) To the snow when sunlight falls on it.
➤ The snow will melt and change into liquid water.
- 2) If Water of seas and oceans gains big amount of thermal energy.
➤ Water of seas and oceans changes in to water vapor.
- 3) To the weather If the sun rays fall very Inclined on an area.
➤ The weather of this area becomes very cold.
- 4) To The level of water in a lake when the rate of evaporation increases.
➤ The level of water will decrease.

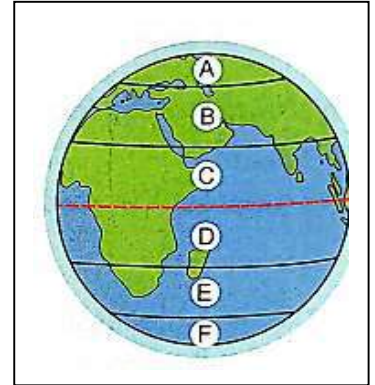
- 5) You cover some leaves in a plant with a plastic bag then put this plant in the direct sunlight for a while.
 - Water droplets will form inside the bag.
- 6) If moist air touches a cold bottle of water.
 - Water vapor will condense on the surface of the bottle.
- 7) If water vapor in air condenses in the sky.
 - Clouds are formed in the sky.
- 8) If the water droplets in the clouds become very heavy.
 - Water droplets fall in the form of rain.
- 9) To the density of air if the cold air is warmed.
 - The density of the air will decrease.
- 10) To the movement of air when solar radiation heats up the air.
 - The air will move upward.
- 11) To the air temperature if there is no wind on Earth.
 - The regions around the equator become extremely hot and the poles will completely freeze.
- 12) To the atmospheric pressure, as we move up toward the top of a mountain.
 - The atmospheric pressure decreases.
- 13) To air density, as we move down toward the bottom of a mountain 4
 - Air density will increase.
- 14) To the temperature of water inside a beaker if we put it under a lighted lamp for few minutes.
 - The temperature of water will increase.
- 15) To the temperature of desert sand at night.
 - The temperature of will decrease.
- 16) If we boil water in a pot on the stove. (Concerning the movement of hot water and cold water).
 - Hot water moves up and cold water falls down.
- 17) To solar panels when dust accumulates on them.
 - Solar panels stop generating energy.

- 18) If the environmental conditions change in the homeland in which some migratory Birds live.**
- They will migrate to another suitable habitat.
- 19) To the living organisms in an ecosystem, if water and light are not available.**
- Living organisms can't survive and will die.
- 20) To the plants in an ecosystem, if they receive too intense light.**
- The parts of plant may damage causing their drying or burning.
- 21) Two similar plants, if they are exposed to the same intensity and duration of light.**
- The two plants will grow with the same rate.
- 22) If the genetic factor of hairless body trait is transferred from sphynx cats parents to their offspring.**
- The trait of hairless body appears on the offspring.
- 23) To the soil if it does not contain any decomposers.**
- The soil will lose the chemical nutrients and will not be fertile.
- 24) To the soil if the temperature in the environment increases.**
- The soil will dry and may lose its nutrients.
- 25) To the soil if it has large amount of pore spaces.**
- It allows water to flow fast through it.
- 26) If the soil holds medium amount of water.**
- It keeps its organic materials, and becomes more fertile.
- 27) To the soil when there is much water in a wet region.**
- It becomes waterlogged soil and contains large amount of water and a little amount of air.
- 28) To the soil when fertile agricultural lands are converted into factories or pastures.**
- Soil depletion may happen.
- 29) To the soil when farmers increase the planted area.**
- Soil erosion will be reduced.
- 30) To the habitat when the number of predators decreases.**
- The number of preys increases and this causes habitat destruction.

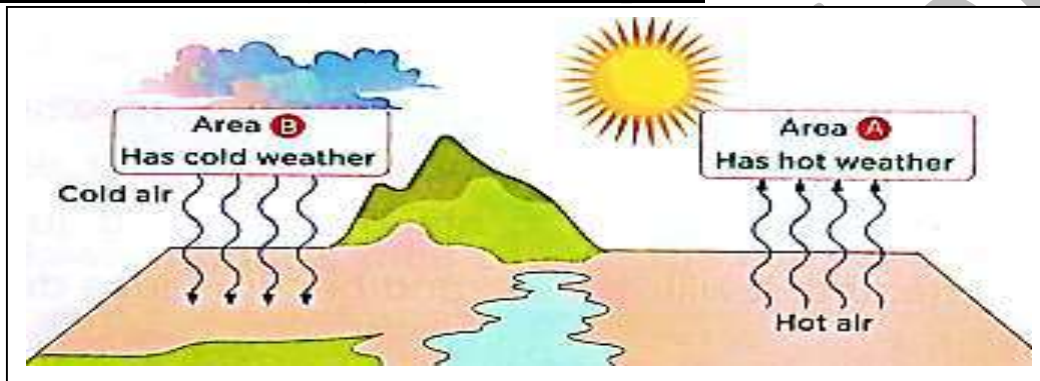
Answer the following questions:

1) Look at the following figure, then complete:

- Areas (C) and (D) are considered as hottest areas.
- Areas (B) and (E) are considered as moderate areas.
- Areas (A) and (F) are considered as coolest areas.

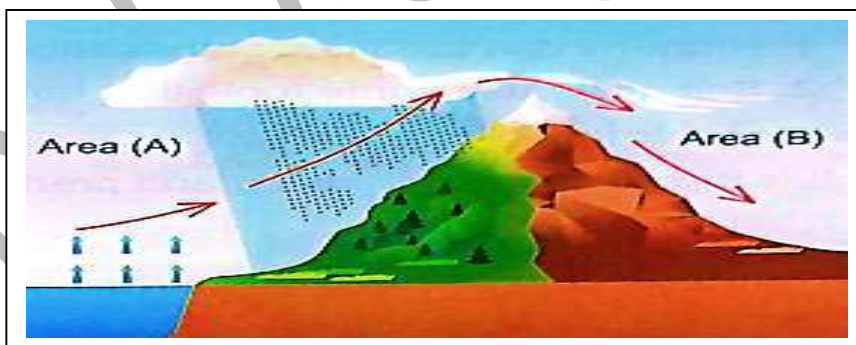


2) Look at the following figure, then complete:



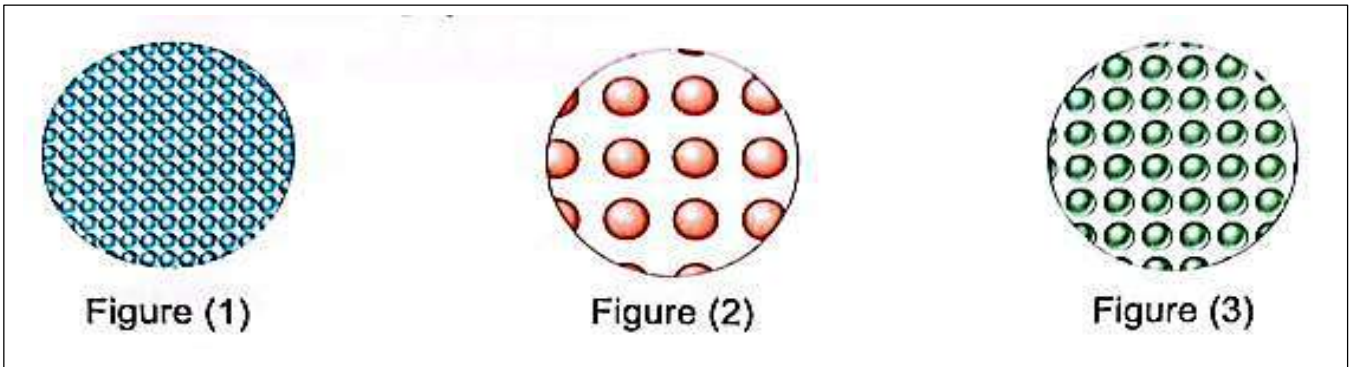
- Air in area (A) moves upward, because it has less density.
- Air in area (A) becomes hot by the effect of solar radiation.
- Air in area (B) moves downward, because it has more density.
- When air in area (A) moves to area (B), it loses thermal energy, so it will fall down near the Earth's surface.

3) Look at the following figure, then complete:



- Area (A) represents the wet side of the mountain, while area (B) represents the dry side of the mountain.
- Condensation of air and precipitation occurs in area (A).
- The rain shadow phenomenon occurs in area (B).

4) Look at the opposite figure, then answer the questions:



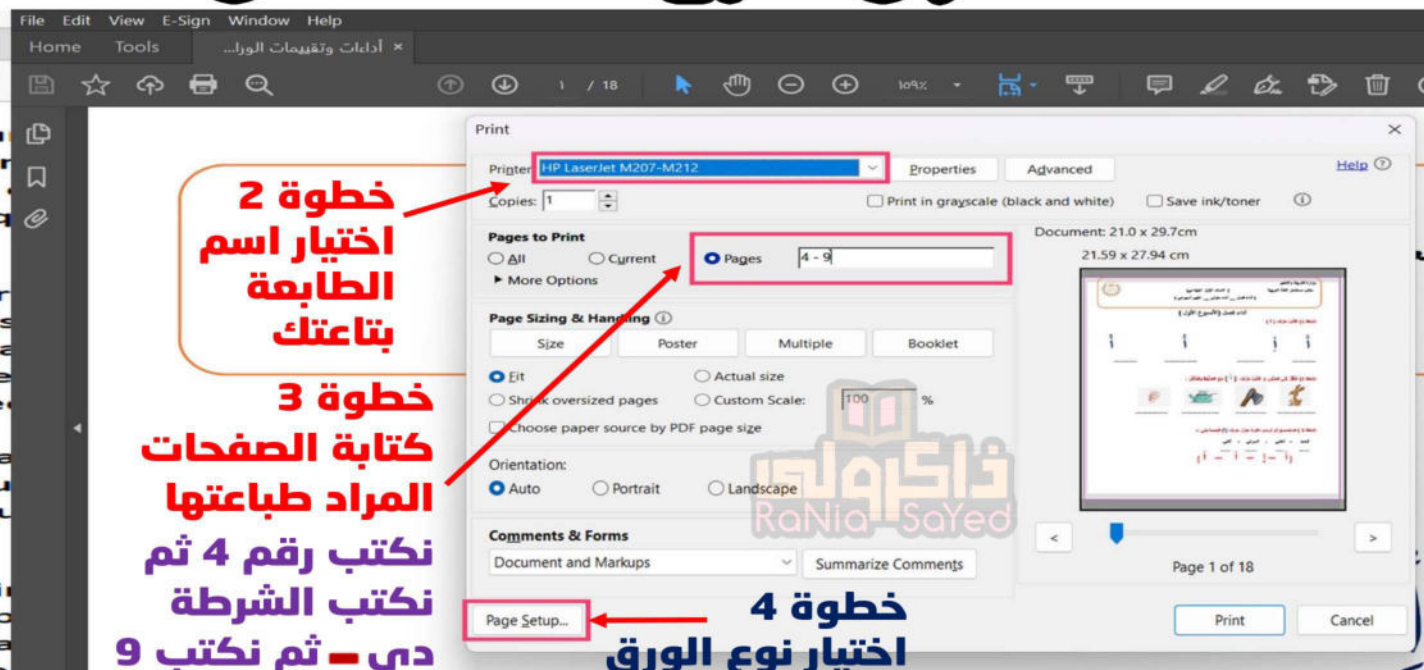
- a) Figure (1) represents the clay soil that has dark (black) color.
- b) Figure (2) represents the sand soil that has large pore spaces.
- c) Figure (3) represents the silt soil that retain medium amount of water.
- d) Soil in figure (2) allows very large amount of water to flow through its particles.

كيفية طباعة صفحات معينة من ملف معين

مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



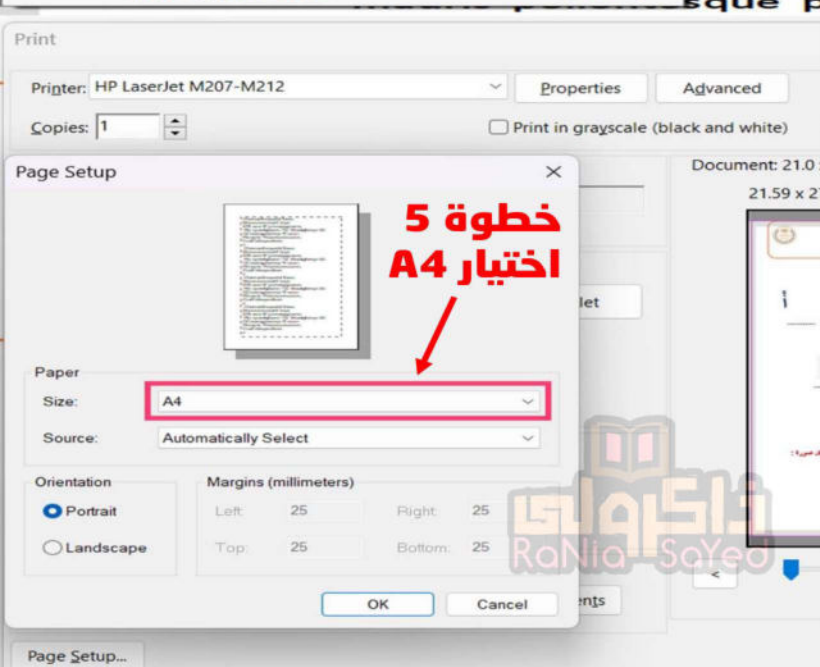
خطوة 1



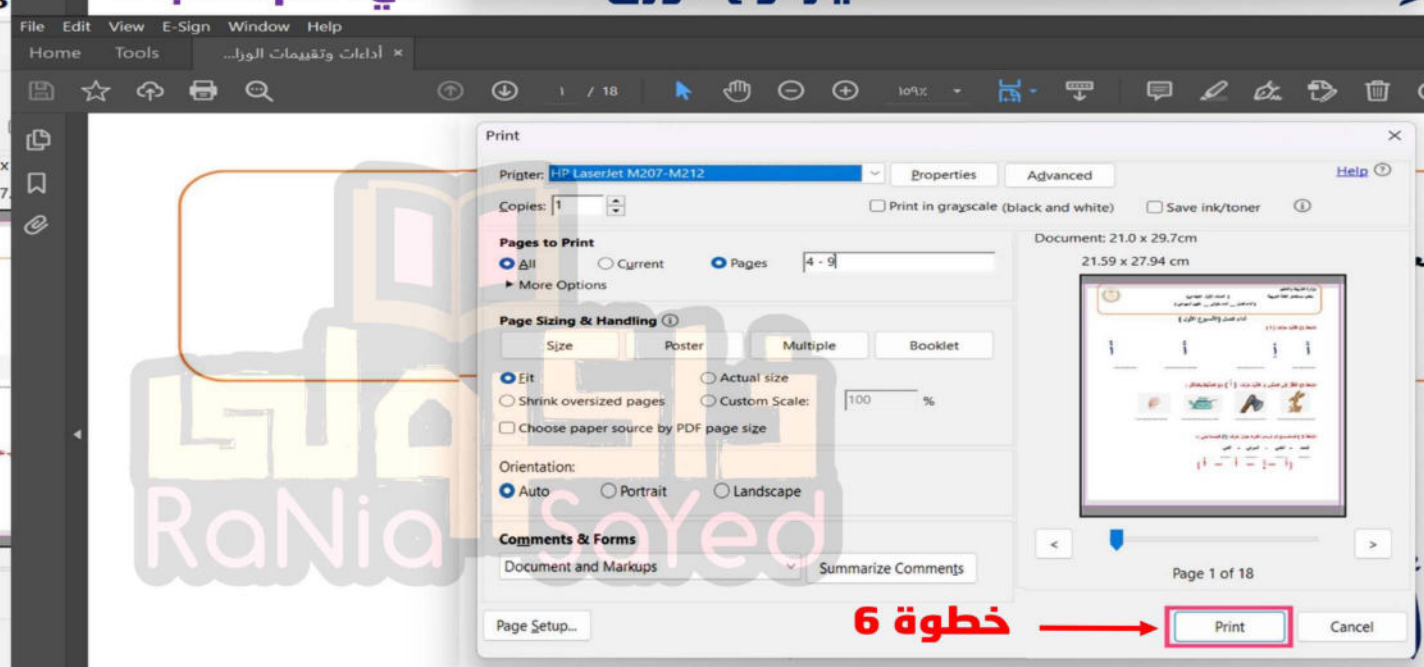
خطوة 2
اختيار اسم
الطابعة
بتاعتك

خطوة 3
كتابة الصفحات
المراد طباعتها
نكتب رقم 4 ثم
نكتب الشرطة
دي - ثم نكتب 9

خطوة 4
اختيار نوع الورق



خطوة 5
اختيار A4



خطوة 6